SCARBOROUGH AND DISTRICT ARCHAEOLOGICAL SOCIETY
RESEARCH REPORT No. 1

Excavations at Crossgates near Scarborough 1947-56

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J. G. RUTTER AND G. DUKE

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CONTENTS

ILLUSTRATIONS

PLATES (between pp. 10-11)

TEXT FIGURES

AN INTRODUCTION TO THE SITE

The Crossgates Romano-British and Anglian settlement is situated on the north side of the Vale of Pickering, immediately south of Seamer Railway Station, in the parish of Seamer, three miles south of Scarborough (National Grid Ref. TA/031833; O.S. 25″ Sheet, Yorkshire North Riding, XCIII, no. 12). The position is low (about 100 ft. above O.D.) but slightly raised above the general level of the vale on a hillock of glacial gravel. There is a northward view down the "Mere" gap towards Scarborough, but the Roman signal station site on the Castle Hill is invisible. Gravel workings took place in the 19th century in the vicinity of the Seamer Junction Auction Mart. In 1942 the Seamer Sand and Gravel Company began operations to the south of the original pit and still continue to extend their workings. It is to the latter period that this report is concerned and, although the full story of the area is probably incomplete, it is considered advisable to publish the results of the excavations which have been completed to date (December 1956). No useful purpose could be served by a postponement to some indefinite date when the gravel-pit is abandoned.

Early in 1947 Mr. W. G. Knowles, manager of the Seamer Sand and Gravel Company, deposited pottery and implements in the Scarborough Museum. This was the first intimation of the existence of a site of archaeological importance at the gravel workings. From that date officials of the Scarborough Museum and members of the Scarborough and District Archaeological Society have co-operated to maintain a constant watch at Crossgates and, as a result, have undertaken the excavations which are the subject of this report. Unfortunately, no surface indications of archaeological interest were present, and air photographs were unhelpful. The nature of the site was such that a systematic examination of the entire area was quite impossible, and the excavations have been conducted under the following conditions:—(1) Salvage operations of features laid bare or damaged by the workings; (2) Trial excavations ahead of the workings; (3) Excavations in fields unaffected by the workings, during periods when not under crops. It is perhaps unnecessary to emphasise that under the first two conditions speed was frequently essential.

Permission to excavate was readily granted by Mr. W. G. Knowles, the late Mr. F. W. Dennis of Crossgates Farm, and Mr. G. Taylor of Low Eastfield Farm, to whom our sincere thanks are due. The active co-operation and sympathetic interest shown by Mr. Knowles contributed greatly to the success of the excavations. We have also received assistance from the gravel-pit workers, who have rescued a number of relics and spared several sites from immediate destruction.

The names of all the members (and non-members) of the Scarborough and District Archaeological Society who have assisted at Crossgates are too numerous to mention individually, but the following were especially active in the work of excavation: Mrs. A. H. Baker, Messrs. T. L. Gwatkin, N. Mitchelson, J. W. Moore, C. Mountford, G. R. Pye, F. C. Rimington, J. G. Scott and R. W. Shepherd. We are indebted to several of these gentlemen for reports and notes on their respective operations. In addition to the excavations under their direction, one or both of the authors have been present during the majority of the other activities. One name must receive special mention, for Mr. G. R. Pye has maintained an almost daily surveillance during winter and summer for over two years. Much information would have disappeared but for this devoted service.

A large number of photographs have been taken, and the names of Messrs. J. P. Best, C. Haines, R. H. Hayes, G. B. Oxenford and T. G. Willey are especially associated with this necessary task.

For assistance in the study of pottery and other artefacts, the authors are grateful for information provided by Dr. P. Corder, Prof. I. A. Richmond and Mr. R. H. Hayes. Knowledge of a specialist nature has been provided generously by Mr. D. W. Humphries (Appendix I), Mr. P. A. Sabine (Appendix II) and Mr. J. G. Speed (p. 61). Finally we acknowledge our great indebtedness to Mr. F. C. Rimington in the preparation of the typescript.

RECENT HISTORY OF SITE

The following brief outline of the recent history of the gravel workings, the archæological discoveries and the general observations on the adjacent fields should be studied in conjunction with Fig. 2 ("Parcel" numbers are from the O.S. 25" sheet):

FIELD A. (Parcel No. 148 in part). The recent gravel workings by the Seamer Sand & Gravel Co. were commenced in this field in 1942 and about two-thirds of the area was almost completely excavated for gravel by 1947. An area towards the south-west was worked in 1954. The field contained most of a 1st century ditched enclosure (see p. 10) and several 1st and 4th century occupation sites. A disused trackway (represented as a footpath on the O.S. 25″ Sheet) extended along the southern edge of Field A and still continues along the northern edge of Field D. It was an extension of Long Lane which leads to Seamer village on the west side of the railway, and probably dates from the time of the Enclosure Acts. The Ditch Excavation No. 3 (see Fig. 3) cut the line of this trackway in Field D, but no layers of stone, gravel or other road material were disclosed. A similar lack of constructional features was noted across Field A. Field A together with H and G are designated Sour Lands on the O.S. 25″ Sheet.

FIELD B (Parcel No. 158). A strip on the eastern side of this field was excavated for gravel in 1954-56 and revealed over two dozen hearths and huts (see p. 21). The remaining area of the field is still arable but will be worked for gravel during the next few years.

FIELD C (Part of Parcel No. 157). Almost completely excavated for gravel in 1948-52. Contained part of the 1st century ditched enclosure (in north-east corner) and a number of 4th century hut-sites (see p. 15).

FIELD D (Parcel No. 156). Untouched by gravel-workings. Contains part of the 1st century ditched enclosure in the north-west corner. Under pasture since 1948. No definite surface indications, but note presence of nettles over north-west quarter of field. A flint burin of simple type was found by Mr. J. Ford about 500 ft. east of the 1st century enclosure in 1955. For disused trackway see under Field A above.

FIELD E (Most of Parcel No. 157). Named Burton Riggs on O.S. 25″ Sheet. Untouched by gravel-workings. Trial excavation (see p. 33) towards northern edge. Air photograph shows unexplained marks in northern part. Arable and searched for surface finds without result.

FIELDS F & G (Parcel Nos. 225 & 149). Arable fields outside the gravel-working area. Searched for surface finds without result.

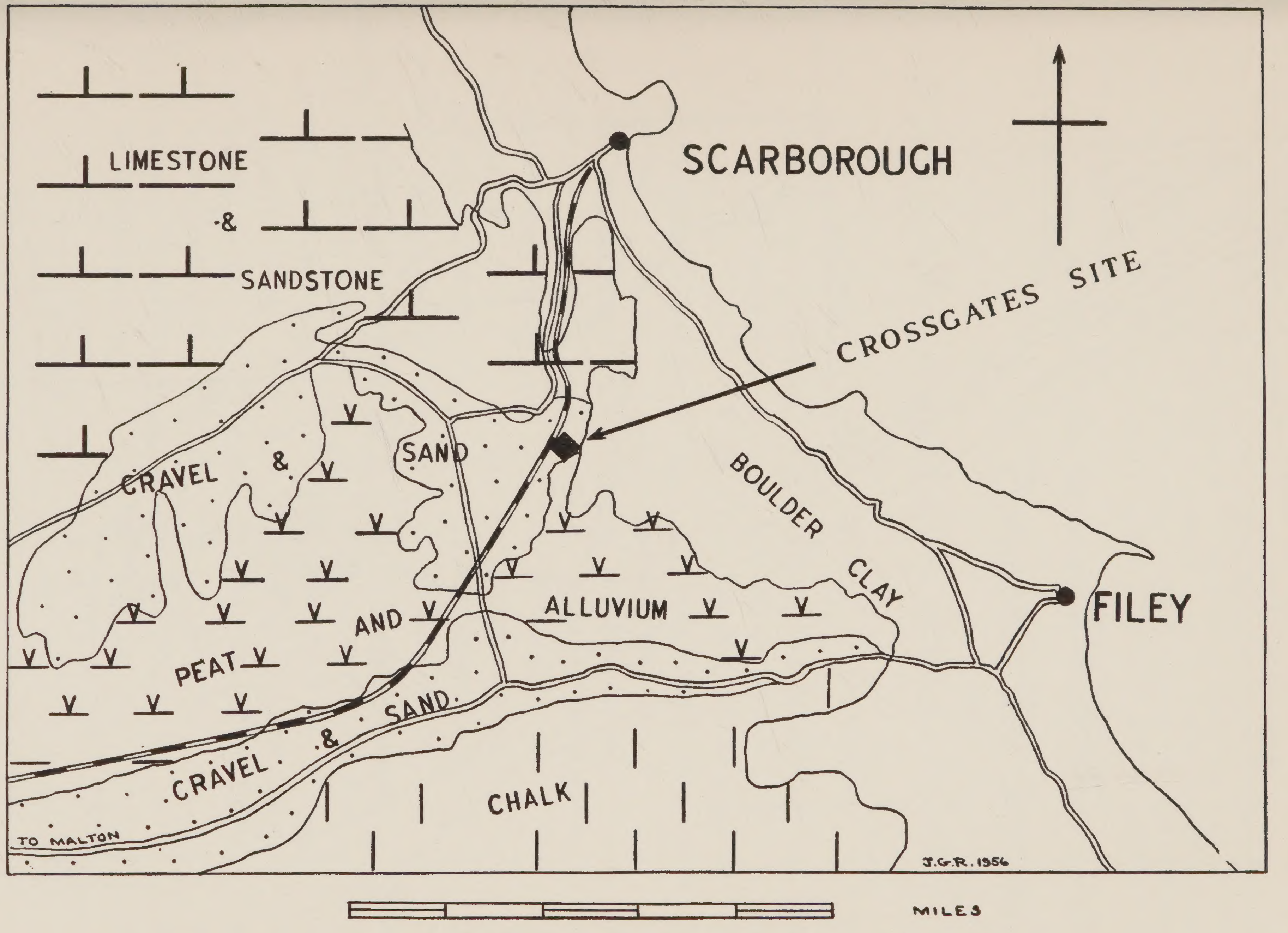


Fig. 1. Geological map showing position of Crossgates.

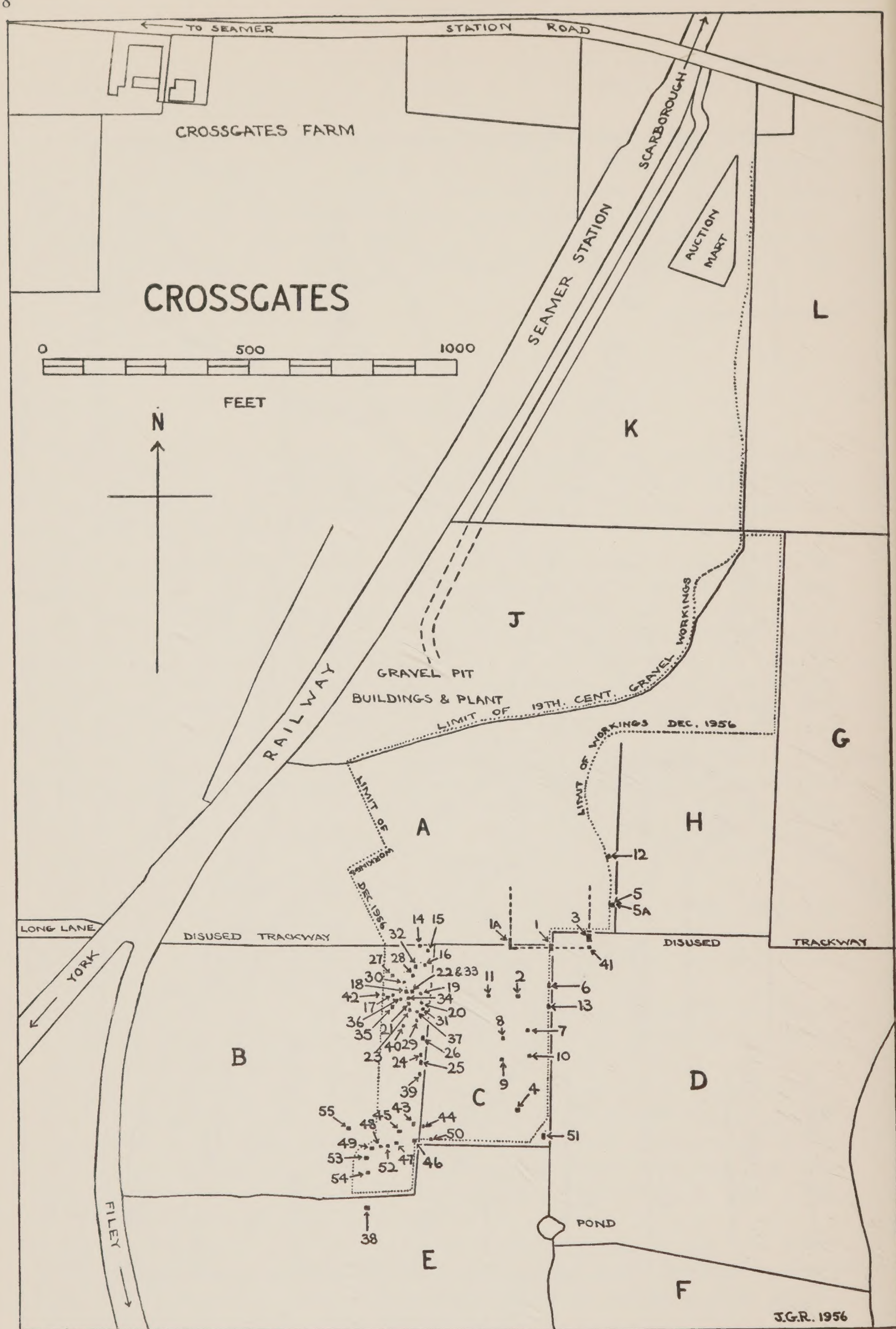


Fig. 2. Crossgates gravel-pit area
(For key to letters and numbers see pages 6 & 9).

FIELD H (Part of Parcel No. 148). Northern portion excavated for gravel 1953-4. No evidence of human occupation. The southern part has remained arable. Surface searched on a number of occasions but only a fragment of Roman roof-tile noted.

FIELDS J & K (Parcel Nos. 147 & 146). These fields together with the adjacent paddocks and site of Seamer Junction Cattle Market, form the area of the 19th century gravel workings. Site of dubious " chariot burial " of the Early Iron Age found about 1862 (see *Mortimer*, 358). The large boulder of Shap granite visible in the station-master's garden at Seamer Station must have been obtained from this area.

FIELD L (Parcel No. 162). Arable field examined several times for surface finds without results.

LIST OF EXCAVATIONS & FIND-SPOTS AS SHOWN ON FIG. 2

THE EXCAVATIONS

I. THE FIRST CENTURY DITCHED ENCLOSURE

IN early 1947, following the deposit in the Scarborough Museum of Roman period pottery and other finds, the Crossgates gravel-pit was inspected by the deputy-curator, Mr. T. L. Gwatkin, and members of the Scarborough and District Archaeological Society. Two sections of completely filled V-shaped ditches were found exposed in the face of the workings near the boundary between Fields A and C (Point 1A on Fig. 2). These sections indicated two ditches about twelve feet in width and from eight to ten feet in depth (from modern surface), one aligned from north to south and the second from east to west. They were subsequently found to make a right-angled junction, and the east-west ditch was observed to penetrate into Field D (see Ditch Excavation No. 1 below). A further section exposed in the south-east corner of Field A indicated a third ditch, which was later found (see Ditch Excavation No. 3 below) to extend north-south. Unfortunately owing to cultivation it has been impossible to excavate in Field D at the point of junction between the east-west ditch and the second north-south ditch. However, there can be no doubt from the agreement of the dimensions and from the contemporaneity of the pottery that the ditch sections belong to a rectangular enclosure which had an east-west width of about 200 feet. Owing to the complete destruction of the northern portion of this enclosure before archaeological examination it is impossible to give a reliable estimate of the north-south width.

From the lower infilling of the ditches at 1A the pottery fragments included the jar rims Nos. 2/6 and 4/8, and from the upper infilling, rims of jars Nos. 4/2, 9A/1, 9A/2, 9A/3, 9A/4 and 9B/1 were recovered. Sherds described as from unstratified deposits in this area included Nos. 7/1, 11/6, 13A/1, 20D/2, and two Anglian wall fragments (No. 34/5). The pottery from both the lower and upper infilling can be referred to the 1st century A.D. without much doubt, in view of the ceramic evidence from the excavated ditch sections described below. Apart from the stray Anglian sherds the unstratified material can be included between the 250—370 A.D. brackets.

From the ditch infilling at an uncertain point to the north of 1A, Mr. W. G. Knowles had retrieved an iron sword (No. 38/1) and a blacksmith's tongs (No. 38/2) in 1946.

DITCH EXCAVATION No. 1 (Fig. 3)

After the salvage of archaeological material from the area of 1A attention was given to a ditch section which became exposed in the pit-face near the fence dividing Fields C & D, and was obviously a continuation of the east-west ditch previously examined at 1A. A narrow strip of gravel about 10 feet wide was left standing alongside the fence, and as this was situated outside the zone of imminent destruction by the gravel workings it was possible to scientifically excavate a section of the ditch and a small area to the immediate north. The task was undertaken by members of the Scarborough and District Archaeological Society under the direction of Mr. J. G. Scott in 1947.

The excavation disclosed that the V-shaped ditch measured 13 feet in width and was cut to a depth of 6½ feet into the glacial gravel. Details of the stratigraphy and finds are as follows:



A. Excavation No. 1: *Section N-S.*



B. Excavation No. 3: *Section E-W.*



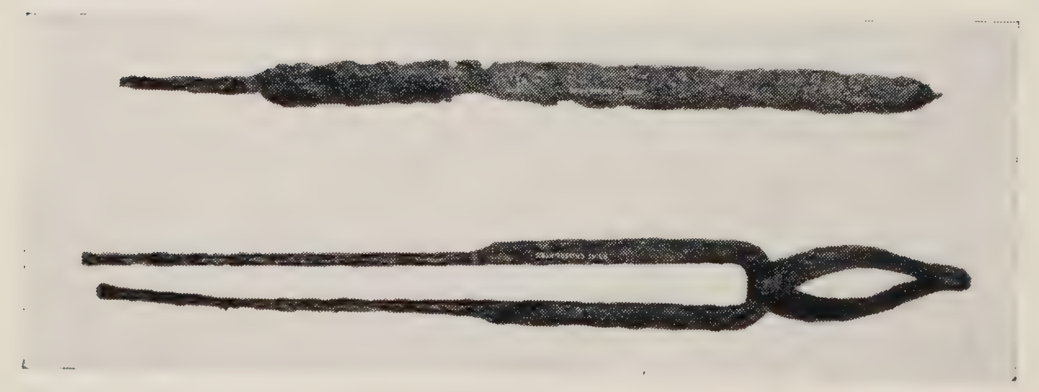
Scarborough Museum

A. Anglian decorated jar No. 34/1 (1/5).



Scarborough Museum

B. Anglian large plain jar No. 32/1 (1/6).



Scarborough Museum

C. Sword No. 38/1 (1/9).
D. *Blacksmith's Tongs No.* 38/2 (1/9).

A. Humus about 18″ to 24″ thick.
B. Dark soil about 18″ to 24″ thick containing pottery of Types 1E, 7, 13B, 15A & 15B and a fragment of roofing tile.
C. "Dirty" gravel with a maximum thickness of about 33″. The upper surface of this deposit was level with the original surface of the natural gravel. An ill-defined depression or pit penetrated the "dirty" gravel into the underlying vegetation layer (Deposit D). This pit, filled with dark soil, contained animal bones and several large stones, but no pottery.
D. A black deposit of vegetation origin with a maximum thickness of 21″. This contained pottery of Types 2 (Nos. 2/7 & 2/8) and 4 (Nos. 4/1, 4/3, 4/6 & 4/7), a Rustic Ware sherd (No. 29/5), part of a handle of an early type amphora, a blue glass bead (No. 45/2), numerous animal bones and iron slag. The fragment of Rustic Ware was found at the very base of this deposit.
E. Clean primary silting about 24″ thick over the drainage channel in the centre of the ditch. The accumulation of silting on the north side of the ditch was three times as great as on the south side.
F. Undisturbed sand and gravel.

The ditch, with its V-shaped section and drainage channel, would appear to be of Roman construction or at least under the strong influence or supervision of the Roman forces. No trace of the rampart existed and none was noted elsewhere along the ditches of this enclosure, but it will be evident from Fig. 3 that the primary silting was of greater thickness on the northern side of the ditch, as would be expected if the rampart, composed of excavated sand and gravel, was thrown up on the northern side and thereby creating a greater erosion surface in that direction. Primary silting, as has received practical demonstration at Crossgates, takes place with rapidity and could be completed in less than ten years. The thick black deposit of vegetation origin (D) indicates that the ditch was open for a considerable period after the silting had ceased and the Rustic Ware sherd found at the base of this layer shows that the latter was in process of formation before the end of the 1st century. In fact, all the sherds from the deposit D could well have found their way there by the same date. However, the precise period of the filling of the ditch is uncertain, although the "dirty" gravel deposit (C), which is probably the demolished rampart, was sealed by dark earth (B) containing pottery of the period 250-370 A.D. As stated below, the rampart may have been removed to make way for a timber building.

EXCAVATION TO NORTH OF DITCH (Fig. 3).

Excavation on the south side of the ditch was only possible for a distance of three feet from the lip, but the northern side was excavated down to the gravel to a distance of twelve feet from the ditch. In the latter area three shallow V-shaped trenches were found cut into the gravel to a depth of about 24″ Trench I extended parallel to the ditch, with its centre line about 57″ from the northern lip of the latter, and was about 40″ in width. Trench II crossed Trench I from north-east to south-west and terminated in a post-hole on the lip of the ditch. Only a fragment of Trench III could be excavated, but this was sufficient to show that it extended parallel to Trench II and crossed Trench I, but terminated before the lip of the ditch. The infilling of these trenches consisted of dark soil (B), which formed a continuous layer below the humus (A) across both the ditch and the trenches. At one point in Trench II a deposit of "dirty" gravel (similar to that of layer C in the ditch) was found below

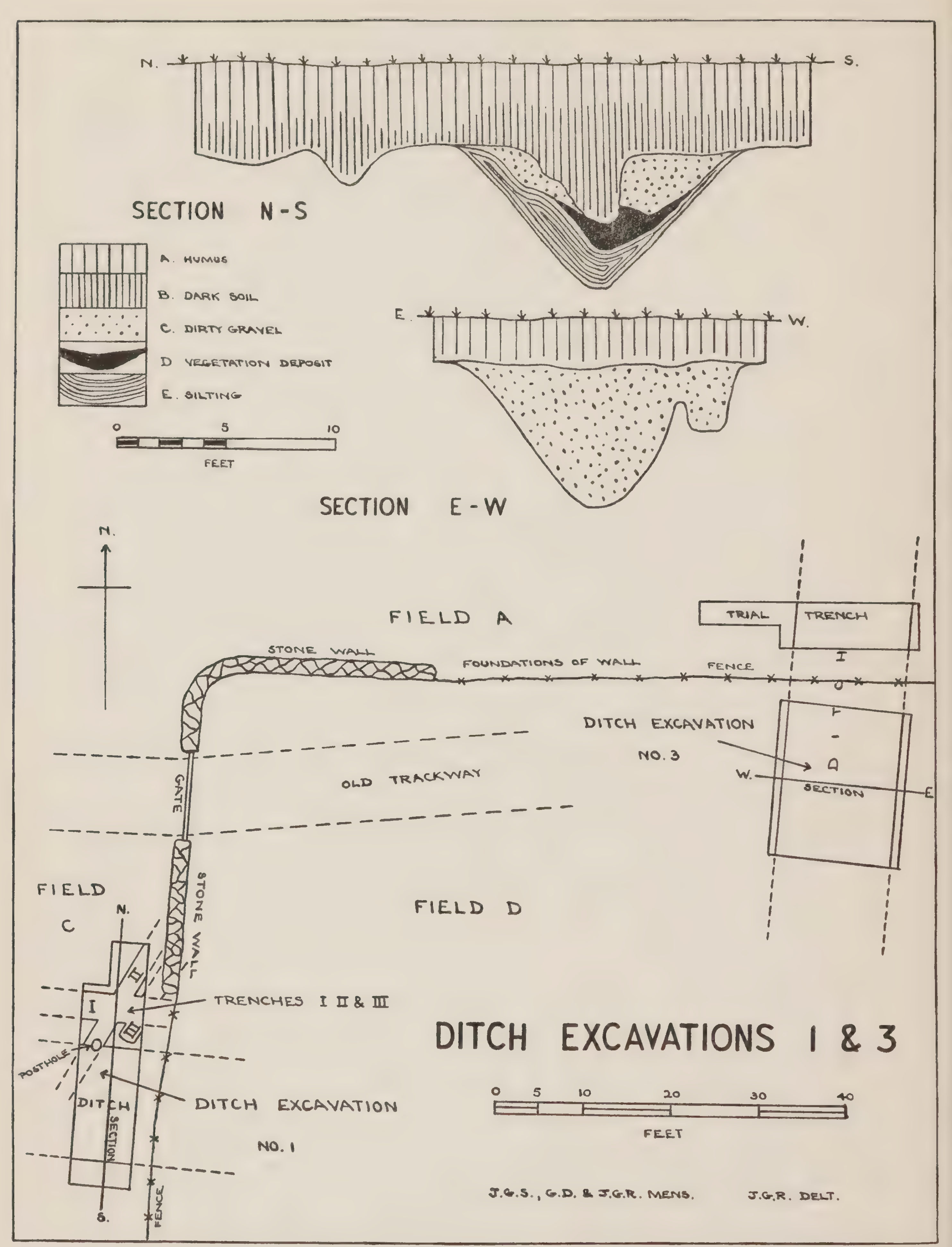


Fig. 3. S.E. Corner of Ditched Enclosure; Plan and Sections of Excavations

the dark soil (B) and above the gravel (F). From the dark soil in the area of the trenches a bronze spoon (No. 37/1) and pottery sherds were found, including two Castor ware fragments and those of Types 1E & 15A, but late 4th century ware was absent.

Trench I may have some direct association with the construction of the ditch, but if so the trench does not have a counterpart in the area of the Ditch Excavation No. 3 (see below), where a deliberate search was made for a similar parallel trench. In view of their shallow nature and the existence of a post-hole in Trench II the suggestion that they were dug for the insertion of the lower portions of the wattle walls of a timber-framed building is strongly supported. The trenches are rather wide for this purpose but the difficulties in cutting a narrow gully in this deposit of gravel and sand are evident. The fragment of roof-tile found in the dark soil (B) above the ditch may be connected with this timber building.

In the limited area that could be excavated it was impossible to establish the relationship of the three trenches to each other, but the presence of the "dirty" gravel at the base of Trench II implies that it represents the remains of the rampart material of the ditch. If this is so the bulk of the rampart material was probably thrown into the ditch and forms the deposit C. Pottery from the dark soil (B) which seals the ditch and fills the trenches contained types datable to the period 250-370 A.D., and this may well be the period of the timber building.

DITCH EXCAVATION No. 3 (Fig. 3)

Following the examination of a ditch section visible in the gravel-pit workings in the south-eastern corner of Field A, permission was obtained from the farmer, Mr. G. Taylor of Low Eastfield Farm, to excavate on the site of the disused trackway which extends along the northern edge of Field D, in order to examine a greater length of this ditch, which evidently extended under this trackway. The excavations were conducted in 1949 under the direction of Messrs. Duke and Shepherd and were particularly arduous owing to the almost rock-like hardness of the infilling.

A length of twenty feet of this north-south ditch was opened up and the dimensions agreed closely with those found in Ditch Excavation No. 1 (see above). It was of V-shape construction cut 6½ feet into the glacial sand and gravel and measured 13 feet across the upper surface of the gravel, which was about 24″ below the modern surface. Into the western side of the main ditch, at a height of 57″ above the bottom, a second ditch 24″ wide had been cut.

There was, however, no succession of deposits comparable with those found at No. 1, for below the upper 24″ of humus (A) the infilling of of the ditch (including the secondary ditch) consisted of a single homogeneous mixture of soil, sand and gravel similar in consistency to the "dirty" gravel (C) found in No. 1. Primary silting was completely absent and it is impossible but to assume that the ditch was deliberately filled, probably shortly after its construction. Evidence for an early destruction is augmented by the small quantity of pottery found at a low level. These eighteen sherds included rims of Type 2 (No. 2/10 & see 2/1) and Type 4 (No. 4/11) jars, a single small fragment of Rustic Ware and a rim sherd of bowl in Flavian red ware (No. 16/1). This collection was in close agreement with the finds made in deposit D in the ditch at No. 1 and can be allocated with safety to the latter part of the 1st century. Other material from the infilling consisted of animal bones in large numbers, ox being most commonly represented, heat-split stones and pot-boilers. In the humus

above the ditch sherds were more numerous and included the 4th century Types 5A & 6A.

There was no evidence to show that the secondary ditch was later in construction than the main ditch, but it is of interest to note that the overall width of the two corresponds exactly to that of the ditch at No. 1.

THE DATE AND PURPOSE OF THE DITCHED ENCLOSURE.

Excavation and observation have shown that the ditch sections examined belonged to a rectangular enclosure of which the east-west axis measured about 200 feet. Its plan and constructional details indicate that it was built either by the Roman forces or at least under their strong influence or supervision. The discovery of a sword and blacksmith's tongs in the ditch and two stone balls which were probably ballista balls, serve to emphasise the military character of the enclosure. The depth of the ditches (+6½ ft.) suggests that the site, although small, was probably of fairly substantial military strength, and as a minor fortress compares favourably in size with the Langton fortlet (*Langton*, pp. 26 ff.) whose four sides measured between 87 feet and 147 feet and whose ditches averaged only 6½ feet in depth from the modern surface. Mr. Corder makes a comparison between the Langton enclosure and the rectangular Agricolan fortlet of Bar Hill on the Antonine Wall. This work, which measured 191 feet by 160 feet and possessed an internal area of just over half an acre (*Bar Hill*, p. 413), was probably about the same size as Crossgates, although the ditches were considerably less impressive in dimensions (width 8—11 ft., depth about 3½—4½ ft.). The earliest fort said to have been erected at Malton—Norton (on the southern bank of the river near the Roman ford) was only 100 feet square (*Gazetteer*, p. 113).

As at Langton and Bar Hill, there were no surface indications of the Crossgates fortlet and a number of similar outposts may await discovery in eastern Yorkshire. Mention can be made of small rectangular earthworks of unknown age and purpose which have been traced on Seamer Moor, in Wykeham Forest, on Levisham Moor, and to the north and north-west of Pickering.

The ceramic evidence from the lower infilling of the Crossgates ditches leaves no doubt that the construction of the ditch falls within the latter part of the 1st century and it demonstrates equally well that the ditches were either neglected (Excavation No. 1) or deliberately filled (Excavation No. 3) before the end of the same century. In fact, it is difficult not to assume that the fortlet was occupied only for a brief period. The significance of the site and its probable position in Roman military strategy is discussed on p. 62.

PROBABLE BUILDINGS WITHIN THE DITCHED ENCLOSURE

Evidence of buildings within the area covered by the Crossgates 1st century fortlet is strongly supported by the following facts: —

1. The discovery of trenches within the enclosure in the Ditch Excavation No. 1, which, it is suggested, are to be connected with a timber-framed building erected after the disuse of the fortlet. Pottery implies the possibility of a date 250—370 A.D. for this structure.

2. Fragments of Roman type roof-tiles have been found scattered over a wide area at Crossgates. The late circular huts are unlikely to have been provided with roof-tiles, but the timber-framed building mentioned above may well have been so covered.

3. It is perhaps significant that the only stone walls which today bound any of the fields adjacent to the Crossgates site are to be found in the north-west corner of Field D (Fig. 3), where two fragments stand within the area of the fortlet. However, from the foundations of ruined walls which can be observed it is evident that the present fragments were once more extensive. The walls are of limestone blocks, several of which display marks of tooling, and it is possible that these stones have been derived from the ruins of buildings erected in the Roman period within the enclosure. Stone buildings were certainly erected within the Langton fortlet after its disuse.

II. THE FIRST CENTURY OCCUPATION AREA

The distribution of pottery finds indicates that the earliest occupation during the Roman period occurred during the last quarter of the 1st century in the area within and around the position of the 1st century ditched enclosure, that is in the S.E. area of Field A, in the N.W. corner of Field D and in the N.E. area of Field C. Unfortunately, the greater part of this locality was destroyed by gravel workings before an archaeological examination could be made and only fragmentary traces of living-floors could be rescued.

OCCUPATION FLOOR No. 5A. (See Fig. 2 for position)

During the excavation of a 4th century floor (No. 5, see below) by Messrs. Duke and Shepherd in 1950, a second occupation level was observed at a depth of 14″ below the 4th century layer. This lower floor consisted of a cobble-stone floor of small glacial boulders placed on the surface of the gravel and covered with black occupation soil of 6″-7″ in depth. Unfortunately, most of the site had been destroyed, but from the occupation deposit ten rims of "Knapton type cookpot" (Nos. 2/2 and 2/4, and see 2/1, 2/6, 2/7 and 2/10), a single sherd of a bowl in Flavian red ware (Type 16), and sixty-seven wall and base fragments of calcite-gritted ware were obtained. In addition a stone hammer (No. 42/1) was also found.

OCCUPATION FLOOR No. 13. (See Fig. 2 for position).

A similar but even more fragmentary occupation floor was found by Mr. Pye in 1954. This also disclosed a layer of small limestone slabs resting upon the gravel surface and covered with a thin deposit of occupation soil. The latter produced calcite-gritted ware including two rims of a Type 2 jar and another of a Type 20D dish. A late 1st century date is possible, but the site may well belong to the 2nd or 3rd centuries.

III. THE FOURTH CENTURY OCCUPATION AREA

(See Fig. 2 for position of sites)

The area of intensive occupation in the 4th century, and especially in the last third of that century, extended over the greater part of Field C, where no less than six huts are known to have occurred, but the spread of pottery and the discovery of fragmentary occupation sites indicate that the settlement still extended over the south-eastern portion of Field A during the last century of the Roman occupation. Unfortunately, the majority of the 4th century huts were destroyed by the gravel-workings before any careful archaeological examination could be made, but owing to the close observation of the area, it is unlikely that the number of habitations in Field C was greater than the six or seven described below.

HUT No. 2 (for plan see *Crossgates* 1948, Fig II).

This hut-site, which was excavated under the direction of Mr. N. Mitchelson in 1948, has been fully described elsewhere (*Crossgates* 1948) and only a summarised version of the report is necessary here. The hut was represented by a roughly circular stone foundation resting upon the gravel about two feet below the modern surface, a saucer-shaped floor of gravel containing a central hearth about 4 feet in diameter, a number of postholes and two storage pits. The considerable quantity of pottery recovered from the site was largely of Signal Station types, but earlier pottery of Types 1E, 2 and 11 may indicate an occupation covering the latter half of the 3rd century and most of the 4th. A description of the pottery and the other minor objects discovered is included in the catalogue of finds.

HUT No. 4 (Fig. 4)

This site was not discovered until it had received considerable damage from a mechanical excavator removing the overburden in 1950. By this time much of the walls of the structure had been completely destroyed and it was only in the north-western arc where a more or less intact section of the perimeter of the hut could be examined. Excavation, which had to be undertaken speedily, was under the direction of Messrs. R. Shepherd and G. Duke, who had to work under difficult circumstances.

The structural features of the hut are described in order from the exterior of the building to the centre, apart from the Fire-hole and Flue which are discussed separately.

THE OUTER WALL. Of the three concentric circular walls, the outer was the most substantial in construction. A fragment 15 feet long was excavated and the line of a further 6 feet was established by probing. The probable radius of the wall was in the neighbourhood of 16 or 17 feet. About one-half of the 15 feet examined consisted merely of the foundation stones resting on the surface of the gravel. which was about 2 feet below the modern ground level at this point. The other half showed several courses of stones still standing and approached to within 6″ to 9″ of the modern surface. In the lower part of this wall clay had been used to "cement" the joints between the stones, which consisted of glacial boulders and pieces of limestone.

THE OUTER TRENCH. A shallow trench 2½—4 feet wide, dug into the gravel to a depth of 13″ to 15″, separated the outer wall from the central wall. On the Outer Wall side the trench was revetted with small boulders. The infilling was a black occupation soil containing a considerable quantity of pottery sherds, iron slag and a stone "trough." The course of both trenches could only be traced on the northern and north-western areas of the site and no evidence of their existence was found towards the south-east, but considerable disturbance had occurred in this area.

THE CENTRAL WALL. About 20 feet of the lowest course of stones of the central wall were excavated. This consisted of a single line of boulders of limestone and glacial origin resting upon the narrow gravel ridge separating the two trenches. Two broken fragments of quern-stones were also incorporated and a Roman coin was found between the stones. The curvature of the section excavated suggested that the radius of the wall was about 14 feet.

THE INNER TRENCH. A second trench separated the Central Wall from the Inner Wall. Its dimensions were identical to those of the Outer Trench and, on the Central Wall side, it was revetted in a similar manner. The infilling of black occupation soil contained a scatter of sherds.

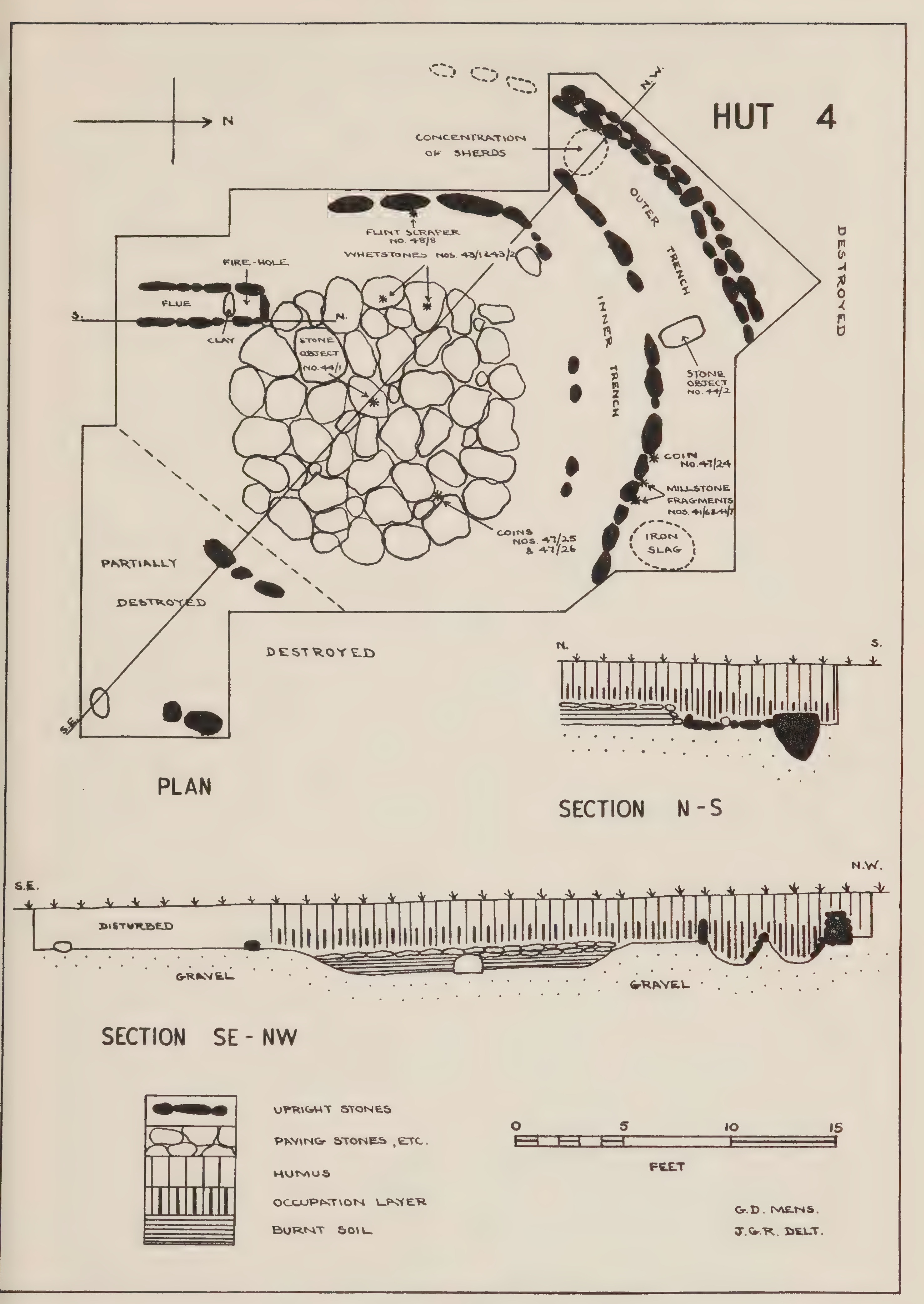


Fig. 4. Hut 4: Plan and Sections

THE INNER WALL. Much of this wall appeared to have been robbed and only fragments of a single course remained, the longest section measuring nearly 12 feet. This disclosed a difference in construction as it was chiefly made up of large single slabs 12—14″ wide set up on edge. The radius of this wall was approximately 9—10 feet.

THE INTERIOR. The greater part of the interior of the hut, which measured about 18 feet in diameter, was covered by a roughly circular stone floor about 13—14 feet in diameter, sloping downwards from north to south (actual drop 9″). The stratigraphy within the floored area was as follows:—

A. Humus, about 12″ thick.
B. Black occupation layer 9″—18″ thick. Contained a scatter of pottery and immediately above the stone floor, two Roman coins.
C. Paved floor of limestone slabs, well laid and apparently intact. A double layer of slabs occurred to the north of the centre. There were no indications of a hearth anywhere on the paving.
D. Burnt layer of soil (see Appendix 1, sample 1), approximately 9″ thick. Contained two fragments of pottery and under a floor-slab in the centre was a stone bowl-shaped object.
E. Glacial sand and gravel.

THE FIRE-HOLE AND FLUE (Fig. 4)

Adjacent to the south-west of the paved floor was a fire-hole and probable flue resting on gravel about one foot below the floor-level. The fire-hole itself consisted of a boxlike structure, 2 feet square, lined on the back and on three sides with stones and on the fourth side (from which the flue leads) with clay. The flue, if such it was, extended from the fire-hole for four feet and consisted of a double row of upright stones of which the final pair had been purposely worked to a point and driven into the ground. These two large slabs were 28″ wide. No cover-stones were found and the floor was undisturbed gravel and sand, the surface of which contained no indication that it had been subjected to great heat (see Appendix 1, sample 2). Samples of burnt soil and charcoal from the Fire-hole were also analysed (Appendix 1, samples 3 & 4) but no definite evidence of smelting was obtained, although it would appear probable that a brown coal or lignite had been used. The objects found during the excavation of Hut No. 4 are as follows:—

POTTERY. A large quantity of sherds was found scattered through the occupation layer above the floor and in the trenches but no finds were made within the Fire-hole and Flue. A marked concentration of about 50 fragments (datable examples belonging to the late 4th century) was discovered in a north-west portion of the Outer Ditch. Only two wall fragments of calcite-gritted ware were obtained from below the paved floor. Of the total classifiable sherds over 60% were from types restricted to the period 370 — 400 A.D., of which about three-quarters were from the "Huntcliff cookpot" (Type IA). Approximately 20% were from vessels restricted to the period 250—370 A.D. and only two rims have been assigned to an earlier date.

COINS. Three Roman coins were found. Two (Nos. 47/25 & 47/26), probably of Valens (364-378 A.D.), but in poor condition, were discovered corroded together immediately above the paved floor of the hut. The third (No. 47/24) was a Constantinopolis (c. 330-337 A.D.) and was found in the Central Wall.

MILLSTONES AND QUERNS. Two fragments of millstones (Nos. 41/6 & 41/7) were found embedded in the Central Wall. A complete upper-stone of a quern (No. 41/4) was also found alongside the paved-floor.

WHETSTONES. Two (Nos. 43/1 & 43/2) were obtained above the paved floor of the hut.

BOWL-SHAPED STONE OBJECT. (No. 44/1). This curious sandstone object of unknown use was found sealed below the paving stones in the centre of the hut. It was inverted, the hole, in what is assumed to be the base, being uppermost.

TROUGH-LIKE STONE OBJECT (No. 44/2). A second stone object of unusual shape, but possibly a mortar, was discovered trough uppermost in the Outer Trench.

IRON KNIFE (No. 38/6). Found on gravel near hut.

LOOM WEIGHT (No. 40/1). From vicinity of hut.

FLINT SCRAPER (No. 48/8). Found against Inner Wall.

IRON SLAG. A heap of slag weighing approximately one cwt. was found in the Outer Trench. The larger fragments weighed from ½lb. to 1lb. A few pieces of iron slag were found scattered elsewhere on the site.

ANIMAL REMAINS. Numerous bones and teeth, chiefly fragmentary and many burnt, were widely distributed through the occupation layer. The remains were largely of ox but sheep was also present.

THE AGE AND PURPOSE OF HUT 4.

The ceramic evidence leaves no doubt that the hut was intensively used during the last third of the 4th century, but earlier pottery types indicate activity on the site at a phase previous to that of the Signal Stations and such a phase may have extended as far back as the second half of the 3rd century. In other words the age of Hut No. 4 is in agreement with that of Hut No. 2.

There are, however, considerable differences between the structural details of the two huts. No. 2 is clearly a roughly circular habitation of the traditional native style which prevailed in the Highland Zone and its upland fringes until the end of the Roman occupation. But No. 4, although definitely following the circular plan, has several unusual characteristics, including the multiple system of concentric walls separated by shallow trenches, a lack of central hearth and postholes, and the inclusion of a fire-hole and its probable flue in the perimeter of the hut. The complicated plan of this structure would appear to be due to a series of enlargements. Originally it was probably a comparatively small hut of about 20 feet in diameter, consisting of a shallow depression in the gravel surrounded by the Inner Wall and probably containing a central hearth. In this form it can be compared with Hut No. 2, with the important exception that Hut No. 4 was surrounded by a drainage trench (The Inner Trench). At a later date an enlargement of the hut was found necessary, the Inner Trench was filled, probably from debris which had accumulated around the hearth, the Central Wall built, the Outer Trench cut and the shallow sunken floor levelled and paved. The broken millstones used in the Central Wall were probaby from the first phase of the occupation and the coin from the wall suggests that the first enlargement was later than the first third of the 4th century. The final enlargement of the hut to a diameter of about 32 feet probably reflects the increased activity in the district during the Signal Station period. The Outer Wall was built apparently without an accompanying trench, the Outer Trench became a rubbish pit for the late 4th century sherds and iron slag and the paved floor was re-laid with the stone bowl-like object sealed below the centre. During its final phase the hut may have been used for industrial purposes—a blacksmith's forge has been suggested, but unfortunately the evidence from the Fire-hole does not

support this theory. In fact we cannot state with any degree of certainty that the latter belongs to any particular phase of the hut and its purpose is also unestablished.

OCCUPATION FLOOR No. 5 (see Fig. 2 for position)

Outside the limits of the 1st century ditched enclosure and near the S.E. corner of Field A an occupation layer was revealed in the edge of the gravel-workings and the site excavated by Messrs. Duke and Shepherd in 1950-1. This deposit was in the humus at a depth of 18″ below the modern turf-line and consisted of a roughly-paved floor measuring over 14 feet from north to south. The dimensions from east to west could not be ascertained as only 4 feet had escaped destruction. The paving consisted of limestone slabs occupying 8 feet 2 inches on the north side and small glacial boulders covering 6 feet on the south. Owing to its fragmentary condition the real nature of the site could not be established.

A small quantity of Crambeck ware and calcite-gritted pottery of unrecognisable types came from above the glacial cobbles. The only pottery finds from above the limestone section were a spindle whorl made from a Crambeck sherd (No. 39/3) and an indeterminate fragment of coarse pottery. Apart from a large number of animal bones chiefly ox, which were distributed over the entire site, no other finds were made in association with the floor. Part of a clay loom-weight (No. 40/5) was found in this area.

A second occupation layer occurred immediately below this 4th century floor and has been described under Occupation Floor No. 5A (see above).

OCCUPATION FLOOR No. 6 (See Fig. 2 for position)

An occupation layer was observed in the pit-face to the south of Ditch Excavation No. 1 and was also examined by Messrs. Duke and Shepherd, although its fragmentary nature revealed little information. A layer of limestone hearth-stones was noted resting upon the surface of the gravel at a depth of 24″ below the modern surface. The only associated finds were a few sherds of a loop-handled jar (No. 6A/1) which has been tentatively allocated to the first two thirds of the 4th century.

HUTS Nos. 7-10.

Four hut-sites in Field C probably similar in character to Hut No. 2 (see above) are known to have been destroyed during the years 1948-1950 in gravel working in the approximate position shown. A few sherds recovered from each site were recorded by G. Duke as late 4th century.

OCCUPATION FLOOR No. 11

A black occupation layer 9″ thick was observed on the surface of the gravel to the west of Hut No. 2 in 1948. There was insufficient time for complete excavation but trenches were cut through the area. A burnt layer with heat-split stones and a single fragment of calcite-gritted ware was found. The site is assumed to belong to the 4th century.

OCCUPATION FLOOR No. 12

This floor was noted in the pit-face in the south-western area of Field A in 1952. It consisted of a small fragmentary layer of limestone slabs resting upon the glacial gravel and covered with a thin dark occupation layer, which contained a few Romano-British sherds, including one of Crambeck ware and a loop-handle from a jar (No. 6A/3).

IV. THE ANGLIAN OCCUPATION AREAS

(1) FIELD B, N.E. AREA (Fig. 5)

In the autumn of 1954, shortly after the removal of the overburden commenced in the north-east corner of Field B, a number of hearths began to appear, until, in an area measuring approximately 100 feet square a total of upwards of twenty were disclosed (see Fig. 5 for distribution). In the majority of cases it was possible to excavate these hearths and the surrounding area with care, largely owing to the constant vigilance of Mr. G. Pye and the co-operation of Mr. W. G. Knowles. The excavations were directed by Messrs. Duke, Pye, Rimington and Rutter.

Reports on the structure and finds of the individual hearths are given below and should be read in conjunction with the vertical sections shown in Fig. 7.

HEARTH No. 17 (Fig. 7)

A pit cut into the glacial sand measuring 78″ from north to south and 60″ from east to west. It was well-made, rectangular in shape and with an almost level base. The stratigraphy and finds were as follows:—

A1 Humus 24″ thick (natural thickness 37″). Contained half a loom-weight (No. 40/3) in lower 6″.

B. An almost solid layer of animal bones, with burnt stones, pot-boilers and a large number of pottery fragments, attaining a maximum thickness of 15″. The animal remains, of which a few were burnt, consisted of ox (the most numerous), horse, sheep and pig. All the pottery, with the exception of a single "Huntcliff cookpot" (Type 1A) rim, belonged to two Anglian vessels (Nos. 32/1 & 34/1), both of which have been restored.

A2. Humus (as A1) 14″ thick. Contained a few bones and burnt stones.

C. A layer of burnt glacial boulders set in a deposit of charcoal 1″—3″ thick below the stones and from 1″ to 12″ thick above, the maximum thickness being against the sides of the pit.

D. Glacial sand capped by a thin layer of gravel. The sand immediately below and on the sides of the pit was reddened by fire.

HEARTH No. 18 (Fig. 7)

A roughly circular bowl-shaped depression in the glacial sand measuring 60″—70″ in diameter and 14″ in depth. The stratigraphy and finds were as follows:

A. Humus 18″ thick (the natural thickness at this point).

C. Three or four layers of burnt glacial boulders embedded in humus containing a little charcoal and a few ox-bones.

D. Glacial sand and gravel.

HEARTH No. 19 (Fig. 7)

A bowl-shaped oval depression in the glacial sand measuring 60″—70″ in diameter and 16″ in depth. The stratigraphy and finds were as follows:

A. Humus 16″ thick at centre of depression (natural thickness 18″).

B. A layer of ox and horse bones 2″—3″ thick.

C. Three or four layers of burnt glacial boulders embedded in charcoal and humus. Maximum thickness 16″.

D. Glacial sand and gravel.

HEARTH No. 20 (Fig. 7).

A roughly circular bowl-shaped depression in the glacial sand about 50″ in diameter and 15″ deep. The stratigraphy and finds were as follows:

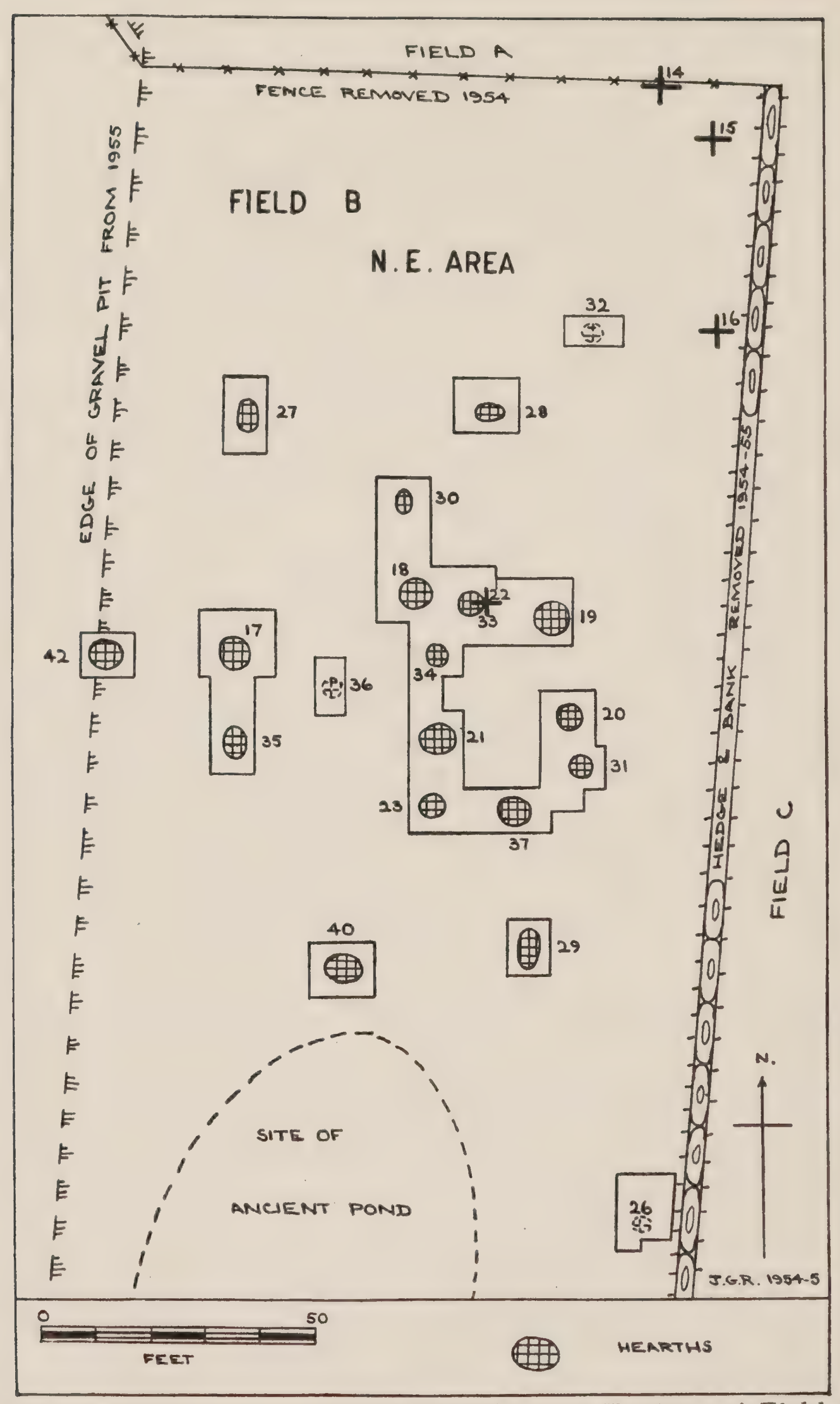


Fig. 5. Distribution of Anglian Hearths in N.E. Area of Field B.

A. Humus 21″ thick at centre of depression (natural thickness 18″).
C. Two or three layers of glacial boulders embedded in humus containing much charcoal and a few bones of horse. Maximum thickness 11″.
D. Glacial sand and gravel.

HEARTH No. 21 (Fig. 7).

A slight flat circular depression in the glacial sand measuring 60″ in diameter and 5″ in depth. The stratigraphy and finds were as follows:

A. Humus 20″ thick (the natural thickness at this point).
B. A layer of small burnt glacial boulders and charcoal 4″—5″ thick. Most of the stones appear to have been arranged around the perimeter of the depression. A few ox-bones occurred.
D. Glacial sand and gravel.
A rim-fragment of Anglian pottery (No. 34/4) was recovered a few feet south of this hearth.

HEARTH No. 23 (Fig. 7)

A roughly circular bowl-shaped depression in the glacial gravel about 50″ in diameter and 18″ in depth. The stratigraphy and finds were as follows:

A. Humus 16″ thick (natural thickness 18″). An Anglian rim fragment (No. 30/7) and a wall sherd came from this deposit.
B. A layer of ox bones 8″ thick.
C. Two or three layers of burnt glacial boulders and limestone slabs embedded in humus. Maximum thickness 12″. A single fragment of Romano-British calcite-gritted ware (probably from a Type 1A jar) was found in the top layer of stones.
D. Glacial sand and gravel.

POSSIBLE HEARTH No. 26 (Not Figured).

After the removal of the overburden, a few burnt boulders were exposed at this point. Subsequent excavation of the area revealed no definite evidence of a hearth but the unstratified humus, which was 24″ to 30″ thick and resting on glacial gravel, produced a variety of artifacts, including a flint scraper (No. 48/2), fragments of querns (Nos. 41/3 & 41/5), a Roman coin (No. 47/23), a key (No. 38/5) and a knife (No. 38/8). Among the pottery fragments were a few Romano-British sherds and a considerable number of Anglian (including Nos. 30/5, 30/6, 31/2, 31/7, 31/8, 32/2, 33/3 & 36/1). A few pieces of burnt and unburnt clay, glass slag and bones of horse and pig were also present. The site, which was situated over forty feet south of the nearest undoubted Anglian hearth, was complicated by the proximity of a modern hedge-bank.

HEARTH No. 27 (Fig. 7)

A saucer-shaped depression in the glacial sand measuring 72″ from north to south and 42″ from east to west with a maximum depth of 7″. The stratigraphy and finds were as follows:

A. Humus 21″ thick (natural thickness at this point 24″).
C1. A single layer of burnt glacial boulders 3″—4″ thick, with a few ox-teeth resting upon them.
C2. A solid layer of charcoal with a maximum thickness of 6″.
D. Glacial sand and gravel.

HEARTH No. 28 (Fig. 7)

This hearth was not set in a depression in the sand and gravel but rested on humus. The stratigraphy and finds were as follows:

A1. Humus 18″ thick (natural thickness at this point 32″).
C. A single layer of burnt glacial boulders embedded in humus covering an oval-shaped area measuring 24″ from north to south and 60″ from east to west. A little charcoal and a few teeth and bones of ox were present.
A2. Dark humus 9″ thick.
D. Glacial sand and gravel.

HEARTH No. 29 (Fig. 7).

An oval-shaped hollow in the glacial sand with a length of 87″ from north to south,, a width of 42″ from east to west and a depth of 18″. The stratigraphy and finds were as follows:

A. Humus 32″ thick at centre (natural thickness 18″). A few 4th century Romano-British sherds and several Anglian sherds (including Nos. 30/4 & 34/7) were found at a depth of 21″. Some ox-bones were also present.
C. An irregular layer of burnt glacial boulders covered the base of the hollow and was piled up to the top of the hollow at the north end. A little charcoal was present and a 4th century Romano-British sherd and two Anglian sherds were associated with the boulders.
D. Glacial sand and gravel.

HEARTH No. 30 (Fig. 7)

This hearth rested on the surface of the glacial sand. The stratigraphy and finds were as follows:

A. Humus 17″ thick (natural thickness at this point 36″).
B. A layer of animal bones in a matrix of earth 14″—16″ thick. A few bones were burnt and the deposit included a number of burnt stones. A large proportion of the bones were complete. Those of ox and horse were plentiful but only a few belonged to pig. A few fragments of Anglian pottery, including a single rim (No. 31/4) were found in the uppermost few inches.
C. A single layer of burnt glacial boulders embedded in charcoal and resting on a layer of charcoal about 3″ thick. The boulders occupied an oval-shaped area measuring 50″ from north to south and 42″ from east to west.
D. Glacial sand and gravel.

HEARTH No. 31 (Fig. 7)

A bowl-shaped pit in the glacial sand measuring 48″ from east to west and 38″ from north to south. The stratigraphy and finds were as follows:

A. Humus 24″ thick (natural thickness at this point 18″).
C1. Several irregular layers of burnt glacial boulders in a matrix of charcoal totalling 12″ in maximum thickness. A few ox-bones occurred.
C2. A solid layer of charcoal 3″—4″ thick.
D. Glacial sand and gravel.

POSSIBLE HEARTH No. 32 (Not figured).

This area was seriously disturbed by a mechanical excavator before it could be examined, but some burnt stones may have represented a destroyed hearth. A jet pendant (No. 46/1) and a few Anglian sherds (including No. 31/5) were salvaged.

HEARTH No. 33 (Fig. 7).

A square-shaped pit with rounded corners cut into the glacial sand and measuring approximately 48″ by 48″. The stratigraphy and finds were as follows:

A. Humus 21″ thick (natural thickness 18″). In the lower 6″ a number of horse and ox bones occurred together with a few fragments of Anglian pottery (including Nos. 30/8 & 30/10).
C. Two or three irregular layers of burnt glacial boulders embedded in charcoal. Maximum thickness 9″.
D. Glacial sand and gravel.

HEARTH No. 34 (Fig. 8)

A shallow saucer-shaped depression in the glacial sand measuring 54″ from north to south and 48″ from east to west. The stratigraphy and finds were as follows:
A. Humus about 20″ thick (natural thickness 18″). A few ox-bones were present at the base of this deposit.
C. A single layer of burnt glacial boulders embedded in charcoal and having a thickness of 4″ or 5″.
D. Glacial sand and gravel.

HEARTH No. 35 (Fig. 8)

A rectangular pit with rounded corners cut into the glacial sand, with its base 56″ below the modern surface. It measured 63″ from north to south and 54″ from east to west. The general stratigraphy and appearance of this site closely resembled that of Hearth No. 17, which was situated about 10 feet to the north. Details of the deposits and finds are as follows:
A1. Humus 29″ thick (natural thickness 38″). From the lower part of this humus Romano-British sherds (including Types 1A and 20D) occurred.
B. A layer of fragmentary animal bones about 4″ or 5″ thick. Ox and horse remains were numerous and a few pig bones were present. There were also a few sherds of Anglian pottery and an unclassifiable sherd from a Romano-British mortar.
A2 Humus about 8″ thick.
C. A layer of burnt glacial boulders embedded in charcoal and resting on a layer of charcoal, the whole having a thickness of 10″—14″. Two fragments of pottery occurred among the boulders, one Romano-British and the other probably Anglian.
D. Glacial gravel and sand.

POSSIBLE HEARTH No. 36 (Not figured)

A hearth probably occurred at this point but was destroyed during the removal of overburden. A fragment of Castor ware and the rim of an Anglian jar (No. 34/2) were recovered from the area.

HEARTH No. 37 (Fig. 8)

A pit roughly circular in shape and about 70″ in diameter cut into the glacial sand. The stratigraphy and finds were as follows:
A. Humus about 25″ thick (natural thickness about 18″). Two fragments of Anglian pottery were found near the base of this deposit.
C. A layer of burnt glacial boulders embedded in charcoal and resting upon a solid layer of charcoal about 2″ thick.
D. Glacial sand and gravel.

HEARTH No. 40 (Fig. 8)

A rectangular pit in the glacial sand measuring about 70″ from east to west and 50″ from north to south, with rounded corners. The stratigraphy and finds were as follows:

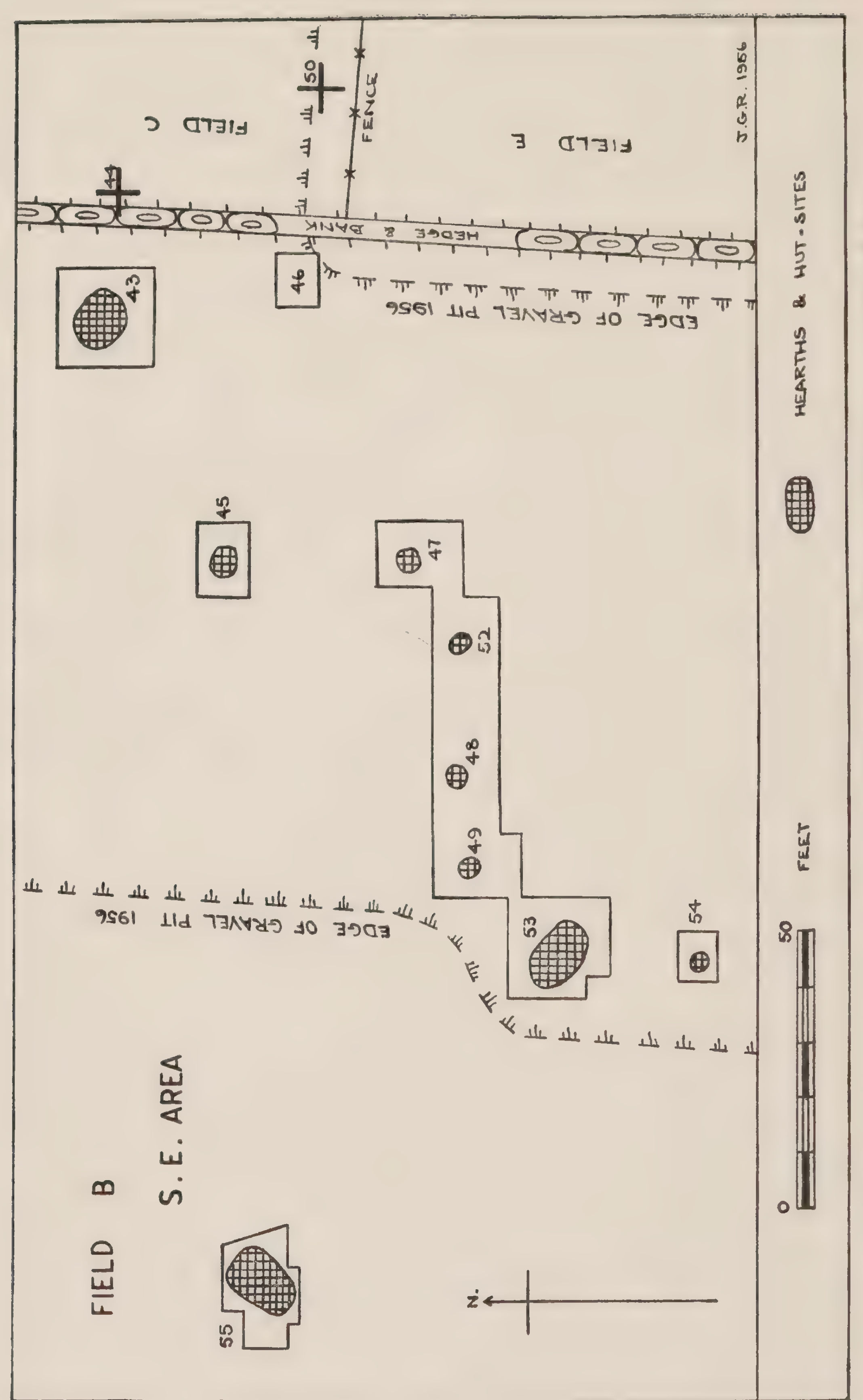


Fig. 6. Distribution of Anglian Hearths and Huts in S.E. Area of Field B.

A. Humus about 26″ thick (natural thickness about 18″). In the lower 6″ rims of a Romano-British jar (No. 1c/2) and an Anglian jar (No. 30/1) and half of an Anglian bead (No. 45/4) were recovered. An iron knife (No. 38/9) was found in the humus a few feet distant.
C1. Three or four layers of burnt glacial boulders embedded in humus. Maximum thickness 16″.
C2. A solid layer of charcoal up to 8″ thick.
D. Glacial sand and gravel.

HEARTH No. 42 (Fig. 8).

An oval-shaped pit sunk into the glacial sand measuring 66″ from east to west and 54″ from north to south. No finds were made from this site. The stratigraphy was as follows:

A. Humus about 28″ thick (natural thickness about 18″).
C1. Three or four layers of burnt glacial boulders embedded in humus forming a deposit about 18″ thick.
C2. A solid layer of charcoal up to 8″ thick.
D. Glacial sand and gravel.

(2) FIELD B, S.E. AREA (Fig. 6)

In the spring of 1956 the gravel-pit workings began to encroach on the south-eastern corner of Field B and, at about 240 feet south of the first group of Anglian hearths, a second series was disclosed, several situated within hut floors. Between the two groups of hearths was the site of a small ancient pond, measuring about 125 feet by 60 feet. No indication of the existence of this pond were previously apparent on the surface of the field. The centre was about 8 feet below the general level of the surface of the sand and gravel and nothing was observed in the carbonaceous infilling of the pond to suggest its period of existence.

At the time of writing (Dec. 1956) the excavation of the sites of hearths and huts is still proceeding in the south-eastern area of Field B, under the direction of Messrs. Pye and Rutter. As progress is largely dependent on the extension of the gravel workings it will be several years before examination of the area is completed. However the structure and finds of the individual hearths and huts which have been excavated to date are given in the following reports.

HEARTH No. 43 (Not figured)

A shallow depression in the glacial sand was completely obliterated before it could be examined, but the workmen salvaged fragments of pottery. The depression, which was filled with blackened soil, was about 12″ deep and probably had a diameter of 10 ft. No hearth-stones were observed and the few animal bones were in a poor condition. All the pottery recovered was Anglian (Nos. 30/3, 30/9, 31/6, 33/1 & 34/3).

HEARTH No. 45 (Fig. 8).

A shallow flat-bottomed pit in the glacial sand measuring 56″ from east to west and 42″ from north to south. The stratigraphy and finds were as follows:

A. Humus 24″ thick (the natural thickness at this point). This was found disturbed and contained two fragments of Anglian pottery (including No. 30/13) and a single ox-tooth.
C1. A layer of large glacial cobbles embedded in charcoal.
C2. A layer of solid charcoal up to 6″ thick.
D. Glacial sand and gravel.

HEARTH No. 47 (Not figured)

A shallow depression in the glacial sand of uncertain size but probably 3 or 4 feet in diameter and about 3 feet deep. Examined after almost complete destruction by a mechanical grab. Appeared to have been filled with blackened soil containing a few potboilers. One small fragment of Anglian pottery was recovered.

HEARTH No. 48 (Fig. 8)

A saucer-shaped depression in the glacial sand measuring 48″ from east to west and 42″ from north to south. The stratigraphy and finds were as follows:

A1. Humus 24″ thick (the natural thickness at this point).

A2. Darkened humus with a few burnt hearth-stones, potboilers, pieces of burnt clay, part of the lower jaw of an ox and two small wall sherds of Anglian ware. Maximum thickness 9″.

D. Glacial sand and gravel.

HEARTH No. 49 (Not figured).

This was partially wrecked during removal of the overburden but appeared to be a saucer-shaped depression 3 or 4 feet in diameter and about 3″ deep in the glacial sand. It was filled with darkened soil which contained a few small Anglian sherds.

PROBABLE HEARTH No. 52 (Not figured).

This site was destroyed during removal of the overburden but a scatter of burnt stones and a few pieces of Anglian pottery (including No. 30/12) were observed. There was no depression in the glacial sand.

HUT No. 53 (Not figured)

An oval-shaped patch of darkened humus resting upon the glacial sand 24″ below the modern surface was disclosed and partly damaged during the removal of overburden. It measured roughly 8 ft. from north-east to south-west and about 14 ft. from north-west to south-east, but the precise dimensions and shape were unattainable, although it is probable that these were similar to those of Hut No. 55 (see below) which was discovered at a later date. However in the case of No. 53 no attempt was made to sink the floor into the gravel. A few burnt glacial boulders were found towards the north-western end and a thin scatter of Anglian pottery sherds (including Nos. 30/13 & 33/2), bones and teeth of ox, sheep and horse (in poor condition) and a few pieces of iron slag occurred through the darkened humus. An iron key or girdle-hanger (No. 38/4) was found about 8 ft. south-east of the hearth stones.

HEARTH No. 54 (Fig. 8)

A bowl-shaped depression in the glacial sand measuring 45″ from north to south and 42″ from east to west. The stratigraphy and finds were as follows:

A1. Humus 22″ thick (the natural thickness at this point).

A2. Darkened humus 13″ thick, containing potboilers, a few hearth-stones and a collection of horse and ox bones, many burnt and a number complete.

D. Glacial sand and Gravel.

HUT No. 55 (Fig. 9)

It proved possible to recover the complete plan of this hut, the site of which was discovered in an undamaged condition. The principal surviving feature was the irregular pear-shaped sunken floor which had been inserted into the gravel to a depth of usually 10″ to 14″. The maximum length of

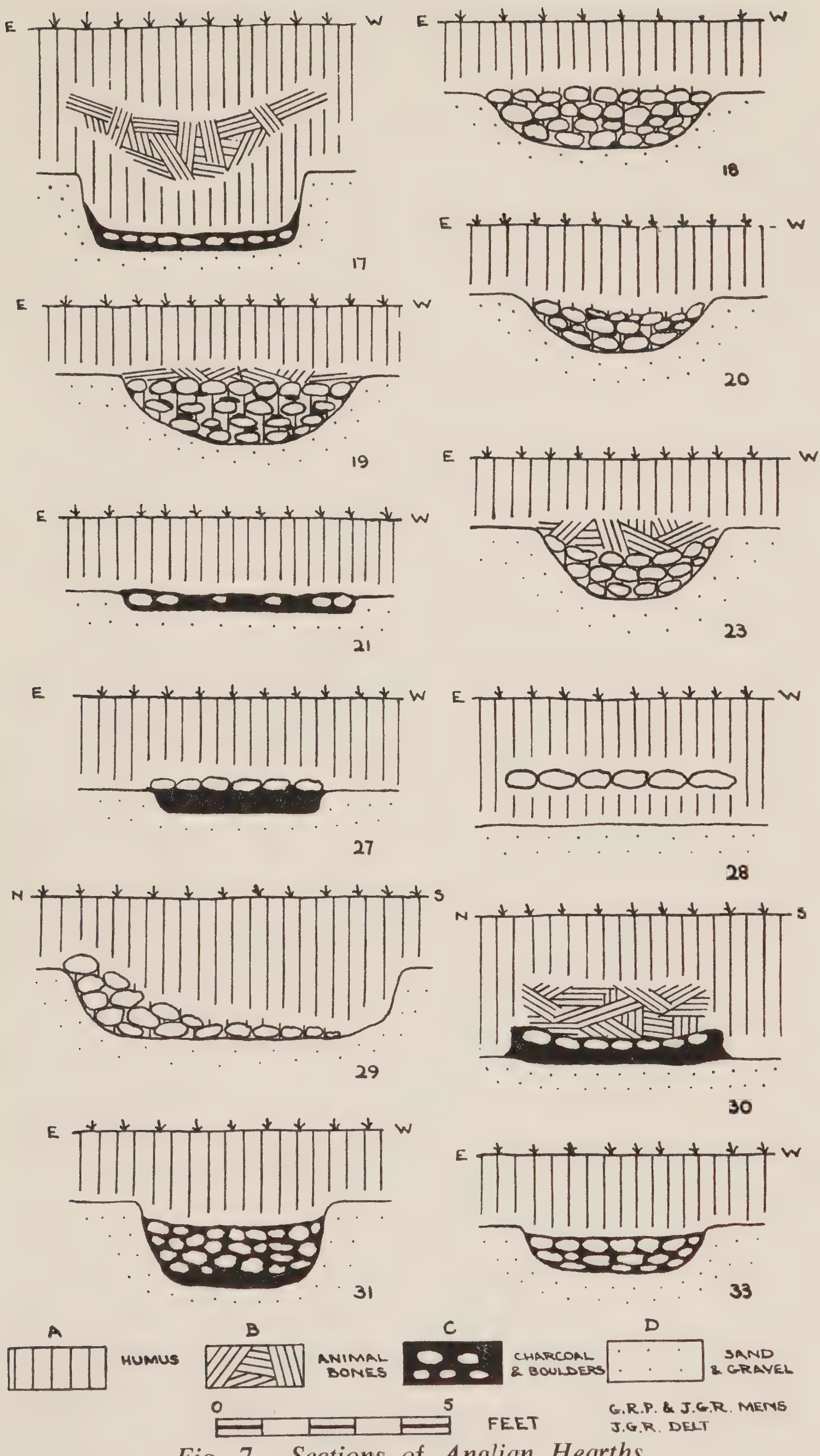


Fig. 7. Sections of Anglian Hearths.

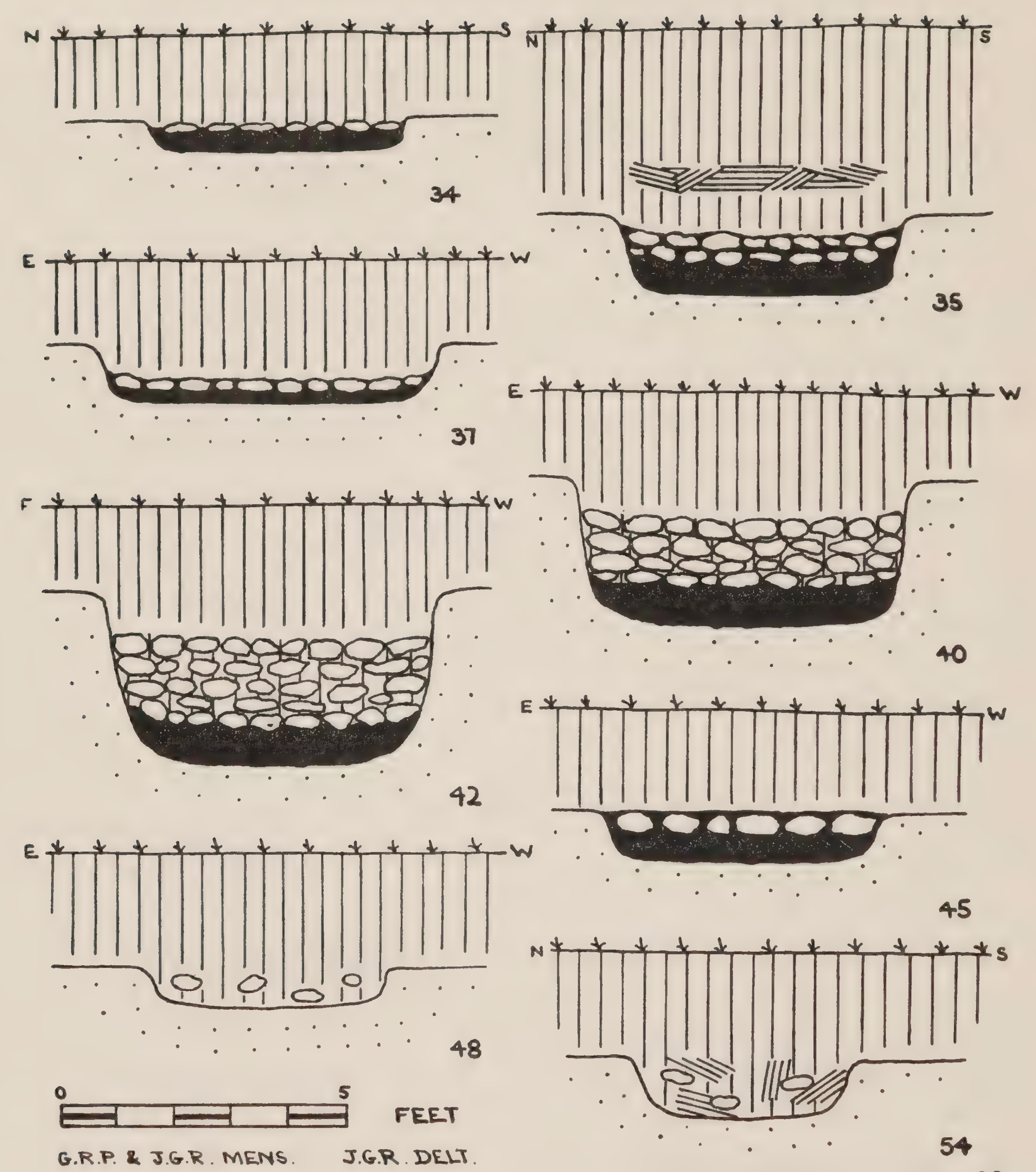


Fig. 8. Sections of Anglian hearths (continued). For key see page 29.

this saucer-shaped depression attained nearly 14 ft. (N.E. to S.W.) and the width 10 ft. (S.E. to N.W.) The base of the hollow was smooth and regular, except for a "ledge" 2 or 3 ft. wide and 3″ to 5″ below the natural surface of the gravel on the N. side. The infilling of this "ledge" was a "dirty" gravel and distinct from the infilling of the main depression which consisted largely of a darkened humus. On the S. & E. the edge of the depression was almost perpendicular but the N. and W. sides were by no means as steep and sharply defined.

The contents of the infilling and the finds from the surrounding excavated area were as follows:

HEARTH-STONES. A group of twelve small burnt and fire-fractured pieces of limestone and two small glacial boulders was situated towards the N.E. end of the hut resting on darkened humus and bones at a height of 8″—10″ above the gravel floor. The surface of the gravel in this area was semi-fused and obviously had been subjected to heat. Two other heat-reddened limestone slabs were found towards the S.W. end of the hut.

CHARCOAL. Only a few traces found and no solid layer was present as on many of the nearby hearths. A thin line of charcoal was noted along the E. side of the depression.

POT-BOILERS. In addition to a group of ten pot-boilers on the N. side of the hut and a second group of seven on the S.W., there were forty-five complete or broken fragments dispersed throughout the darkened humus.

POTTERY. Eighteen fragments of undecorated Anglian pottery were found on this site, all but one within the darkened humus. Parts of at least four vessels were present, including Nos. 30/14, 30/15 & 31/6. A rim sherd of a Crambeck bowl (Type 14A) was also present near the hearth.

CLAY. A piece of soft grey clay measuring about 5″ in diameter was found resting on the gravel at the S.W. end of the hut. A few fragments were scattered elsewhere in the darkened humus.

QUERN FRAGMENT (No. 41/9). Found immediately outside the hut floor. Possibly moved from original position during removal of overburden.

ANIMAL REMAINS. These were few in number and in a decayed condition. They were scattered principally in the centre of the hut and were composed of the following:—Ox; one fragment of skull, two fragmentary lower jaws, nineteen teeth. Sheep; one half of lower jaw, two teeth. Unidentified fragments of bone; twenty-six.

SUMMARY OF THE STRUCTURAL EVIDENCE OF THE ANGLIAN SETTLEMENT

The area of the Anglian settlement, as present known, occupies about two acres in the south-east and north-east portions of Field B, but there are indications that it extends over a much larger area of this field. The structural evidence of this occupation consists of two dozen or more hearths presumably of an open-air nature and the two recently discovered hut floors with internal hearths.

All the open-air hearths possessed one or more layers of burnt glacial boulders. These stones were usually from four to twelve inches in length and few stones of this size were found outside the hearths. Only in one instance were stones of a different origin used — Hearth No. 23 contained

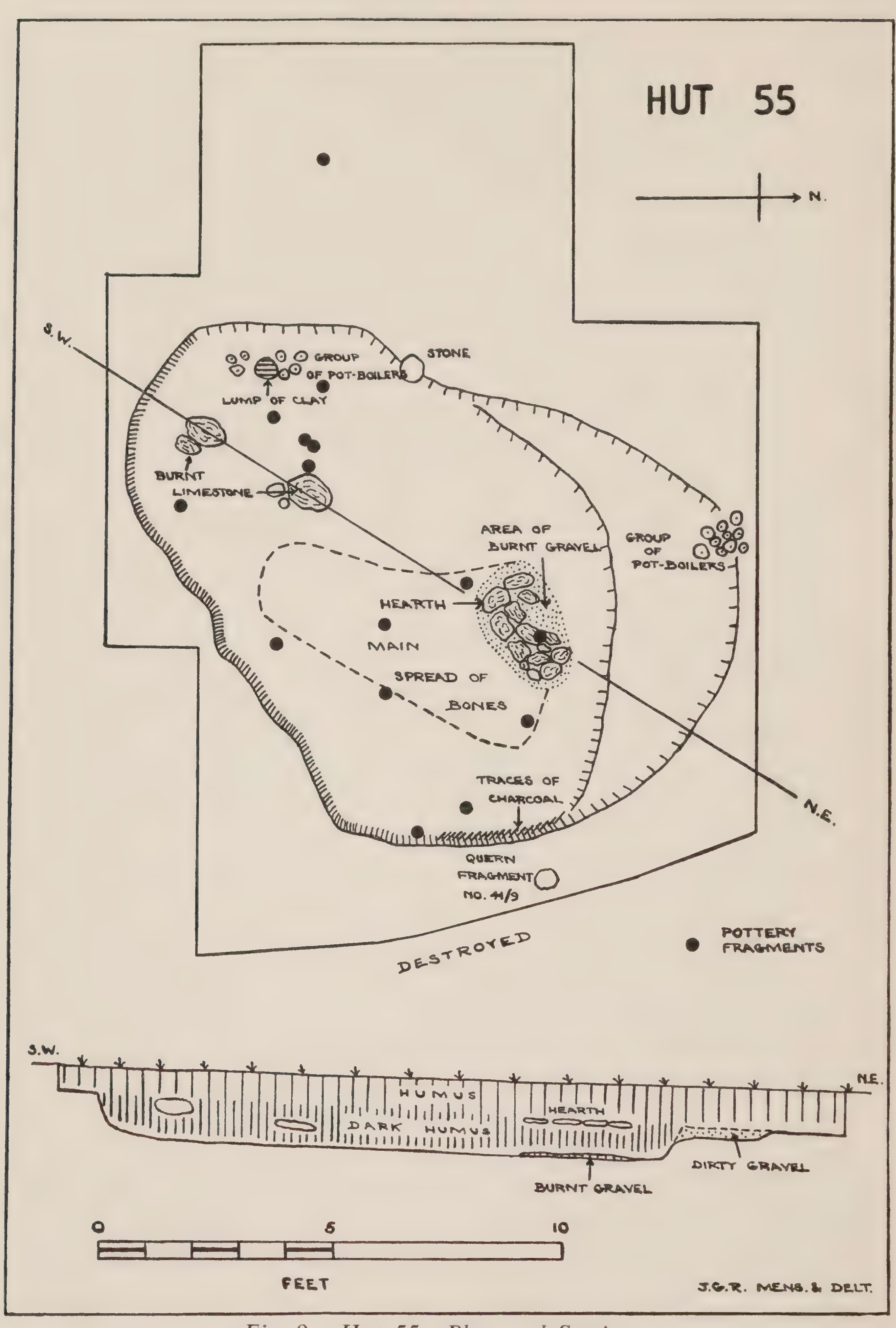


Fig. 9. Hut 55: Plan and Section.

a number of limestone slabs. Normally where a single horizon of boulders was present, these were arranged in a compact level layer. In several cases, where more than one layer of stones occurred, these were seen to possess a stratified appearance and it was obvious that new layers of hearth-stones had been inserted above the original one. Several hearths (e.g. Nos. 17, 27 & 42) had a substantial layer of charcoal below the hearth-stones. In almost every example the layers of hearth-stones were placed in a depression or pit sunk into the glacial deposit. Over half were in pits from 10″ to 22″ deep in the sand and gravel, over one quarter were in depressions between 2″ and 9″ deep and only two of the pits (Nos. 40 & 42) exceeded 23″. In one case (No. 28), the layer of boulders was found in the humus about 9″ above the gravel. The pits and depressions varied in shape, a number being rectangular with rounded corners but the majority were oval and measured from four to six feet in diameter.

No post-holes have been found associated with these hearths or elsewhere in the entire area of Field B so far examined, which, of course, includes the sites of Huts 53 & 55. It is not necessary to summarise the details of the two hut-sites, only one of which produced a complete plan (Fig. 9).

V. TRIAL EXCAVATIONS AND CHANCE FINDS

FIND-SPOT No. 14 (Field B) (see Fig. 5 for position).

An Anglian bead (No. 45/1) was found in the humus.

FIND-SPOT No. 15 (Field B) (see Fig. 5 for position).

Two "Huntcliff cookpot" (Type 1A) rims and part of a small Anglian beaker (No. 35) now restored, were obtained from the humus at this point by gravel-pit workers.

FIND-SPOT No. 16 (Field B) (see Fig. 5 for position).

A fragment of a quern (No. 41/2) was found on the surface after the removal of the overburden.

FIND-SPOT No. 22 (Field B) (see Fig. 5 for position).

A Roman coin (No. 47/22) was picked up from the surface of the gravel after the removal of the burden.

FIND-SPOT No. 24 (Field B) (see Fig. 2 for position).

A spindle-whorl (No. 39/1) was found in the humus.

FIND-SPOT No. 25 (Field B) (see Fig. 2 for position)

The base of an Anglian jar (No. 31/3) was found by workmen removing overburden. The area was carefully examined without the discovery of further finds.

TRIAL EXCAVATION No. 38 (Field E) (see Fig. 2 for position).

An area of 128 square feet was excavated down to the glacial gravel in 1955. The lowest few inches of the humus, which attained a depth of about 24″, contained a spread of pottery fragments, two halves of a broken hearth-stone and a few pieces of iron slag. The pottery consisted of twenty-one pieces of Anglian ware (including rim sherds Nos. 30/11 and 31/1, and a wall sherd No. 36/3) and a single Castor ware sherd. These finds suggest that the Anglian occupation area in the south-western portion of Field B extends into Field E. The latter is under cultivation but it is possible that further limited excavations can be undertaken in this field.

FIND SPOT No. 39 (Field B) (see Fig. 2 for position)

After the clearance of the overburden the broken half of an Anglian bead (No. 45/3), a Romano-British sherd (No. 20A/4) and part of a roof-tile were found in this locality.

TRIAL EXCAVATION No. 41 (Field D) (see Fig. 2 for position)

Owing to the limited nature of this excavation which was restricted by the cultivation of the field, only the humus to a depth of 30″ could be examined. It is sufficient to record that a few fragments of Romano-British pottery belonging to the period 250—400 A.D. were recovered, including rims Nos. 22/4 and 25/1 and one of Type 1A.

FIND-SPOT No. 44 (Field C) (see Fig. 6 for position)

A mediæval buckle (No. 37/3) was found in the humus at this point.

COIN HOARD No. 46 (Field B) (see Fig. 6 for position)

A hoard of twenty-one Roman coins (see p. 59) of Tetricus I & II (*circa* 270—273 A.D.) was found in the disturbed overburden. They were all within an area of 12″ by 18″ at a depth of about 15″ below the modern surface and were probably moved a few feet from their original position by the mechanical grab. The surrounding area was carefully examined but no sign of a container was disclosed.

FIND-SPOT No. 50 (Field C) (see Fig. 6 for position)

The base of a large Anglian jar (No. 30/4) in many fragments was found in the humus at this point.

TRIAL EXCAVATION No. 51 (Field C) (see Fig. 2 for position)

In 1956 Mr. Pye opened trial trenches in the south-eastern angle of Field C, which penetrated the humus to a depth of 4 feet without the discovery of any stratification. Scattered through the deposit of humus was a considerable quantity of Romano-British pottery including Types 1A, 1B, 1D, 5A, 20D and 24 (4th century types), a Roman coin (No. 47/27), an iron nail (No. 38/11), a piece of roofing tile and part of a whorl (No. 39/4).

THE FINDS

I. ROMAN PERIOD POTTERY

The vast mass of Romano-British pottery discovered at Crossgates has been separated into some four dozen types and sub-types, representing almost all the varieties found locally in the Scarborough district during the whole of the Roman period. For this reason alone the Crossgates site has proved one of outstanding importance in Eastern Yorkshire and it has been deemed necessary to give some prominence to the typology of the ceramic finds. However, before considering the various types of vessels in detail, a brief account of the different fabrics and sources of manufacture is appended below.

ANALYSIS OF WARES AT CROSSGATES

WARE	PERCENTAGE	
"Brigantian" (Types 4, 9A & 9B)		5%
Romano-British Gritted Wares:		
Huntcliff-type cookpot (Type 1A)	30%	64%
Types 1B, 1C, 1D & 1E	13%	
Knapton-type cookpot (Type 2)	12%	
Type 20D	5%	
Other types	4%	
Crambeck:		
Grey ware	15%	20.5%
Cream and Buff ware	5%	
Red ware	0.5%	
Norton (& Throlam) type wares		3.5%
Castor ware		3%
Rustic Ware		0.5%
Flavian Red Ware		0.5%
Other & doubtful wares		3%

"BRIGANTIAN" POTTERY

Types 4, 9A & 9B have been included under this title. They bear strong resemblances to pottery found on a number of sites in northern England and Scotland but parallels to all of the Crossgates forms are not found on any one site elsewhere. However the general similarities of these native hand-made pots over such a wide region together with the localised variations in profile and fabric appear to indicate a common tradition and a long period of isolated evolution. The implication has been drawn that the late Bronze Age peoples survived in undisputed possession of large areas of the North into the Roman period, a view agreeing with that advanced by Mr. M. R. Hull in connection with the Costa Beck and Thornton Dale settlements. Fingertip decoration present on a few rims from Thornton Dale and Langton has lent support to this theory, to which can now be added the single rim with cabled lip (No. 9B/2) from Crossgates.

The Crossgates Types 4, 9A & 9B possess the characteristics typical of "Brigantian" ware. The workmanship is of a low standard, the profile is weakly curved, the shoulder unmarked and the vessels completely hand-made. It is often difficult to ascertain the diameter of the rim and the angle. The fabric is usually heavily gritted and from buff to black in colour.

A few remarks on the date and present-known distribution of "Brigantian" ware in Yorkshire appear necessary, although a recent assessment of the subject has been made by Sir Mortimer Wheeler (*Stanwick,* 38 ff). At Costa Beck near Pickering, nothing datable was found associated, but from the Thornton Dale site a brooch of 'Aucissa' type and pre-Flavian in date, together with Samian sherds, provide a lower bracket around A.D. 70. At Langton "Brigantian" ware was found associated with Flavian pottery from the ditches of the early fortlet dated A.D. 71—80. In his report on the pottery found in a trench at Eastburn, near Driffield, with Roman sherds, Mr. P. Corder suggests a date of A.D. 70—110 for the collection. At Stanwick the Brigantian fortifications were occupied *circa* A.D. 50 to 74. The Staxton site, only 2½ miles S.S.W. of Crossgates, has produced "Brigantian" pottery, some of which is figured in this report (Nos. 4/12, 4/13 & 9B/3), but details of the find are uncertain, although the datable Roman objects discovered belong to the late 1st and early 2nd centuries.

At Crossgates all the stratified examples of "Brigantian" ware came from the infilling of the 1st century ditch and in view of the associated finds a date of *circa* A.D. 75—100 would appear acceptable.

ROMANO-BRITISH GRITTED WARES

The "Brigantian" pottery is undoubtedly the direct origin of the great class of coarse pottery conveniently termed gritted wares, which persisted in northern England through the entire period of the Roman occupation. Under this heading are fabrics frequently referred to as Knapton, Huntcliff, calcite-gritted, pitted calcite and vesicular wares. In view of the considerable variations in these fabrics the names used are often misleading and inaccurate, for instance, although calcite is the predominant tempering agent in eastern Yorkshire, other grits, including flint, chalk, ironstone and fine gravel, are sometimes used. Furthermore, "vesiculation" or pitting is merely the result of chemical action whereby the calcite fragments are dissolved and small pits created in their stead.

No less than 64% of the Romano-British pottery discovered at Crossgates can be included in this class, thereby emphasising the importance of the gritted wares, especially in the manufacture of storage jars and cooking pots; an importance which increased enormously in the 4th century with the arrival of the Huntcliff-type cookpot (Type 1A).

Knapton is the nearest kiln-site which is known to have produced gritted ware, including Types 1A, 2 & 20D, but other undiscovered kilns must have produced vast quantities of pottery in this ware.

CRAMBECK WARES

Three distinct groups of fabric from the Crambeck kilns are present at Crossgates. Together they are responsible for 20.5% of the total Roman period pottery, and, therefore, indicate that the Crambeck kilns, which were working from *circa* 300 to *circa* 395 A.D., were the principal sources of the non-gritted ware pottery during the 4th century. The site of the kilns, between Malton and York, is about twenty-five miles from Crossgates.

(1) Hard grey ware, similar to the 3rd century Norton ware but of a smoother finish, provided about three-quarters of the Crambeck pottery at Crossgates, including jars, chiefly of the handled variety (Types 10A & 10B), bowls (Types 13A, 14A, 14B, 15A, 15B) and dishes (Types 20A & 20B).

(2) A cream or light buff-coloured ware was used for the mortaria (Types 21—24) and for a few of the bowls (Types 17B, 18 & 19) and represented about one quarter of the Crambeck pottery.

(3) Only two sherds of a hard red ware occurred, both from bowls of Type 17A.

NORTON & THROLAM WARES

These two 3rd century East Riding fabrics, closely allied in texture, are of a stony hard grey character. Only a small proportion (3.5%) of the Crossgates pottery belongs to these types of ware and, although the presence of Norton ware is probable (see Types 13A, 20A, 20C, 25 & 26,) that of Throlam is in considerable doubt (see Types 25 & 28). The Norton kilns, nearly twenty miles distant from Crossgates were in operation *circa* 220—280 A.D. and those of Throlam, over thirty miles away, *circa* 250—300 A.D.

CASTOR WARE

Sherds of this distinctive Northamptonshire ware, chiefly from beakers (No. 29/4), but in one case from a bowl (Type 14D), were widely dispersed at Crossgates. Castor ware is not uncommon on East Yorkshire Romano-British sites and its presence suggests a considerable export of pottery from the Midlands to the North, especially during the 4th century.

OTHER WARES

A few 1st century sherds of "rustic" ware (No. 29/5) and of Flavian red ware (Type 16) occurred at Crossgates but the kiln sources of these products remain unknown.

It is of interest to note the complete absence of two fabrics, both of which have been present on many East Yorkshire sites: Parisian and Samian wares. The former has been found at *Rudston* (Fig. 1V, no. 2), *Elmswell* 1935-6, Fig. 5, nos. 6 & 7; 1938, Fig. 13, no. 24) and elsewhere (*Corder* 1956). The imported Samian ware was fairly plentiful at *Elmswell* (1938, Figs. 6 & 7), *Malton* (Figs. 18-20) and *Langton* (Fig. 23). It was also present at Staxton (publication pending) and there were even two fragments on the Castle Hill, Scarborough (*Signal Stations*, p. 222).

JARS

TYPE 1A (*Signal Stations* Type 26, *Crambeck* Type 6). The typical "Huntcliff Cookpot."

Vessels of this type were exceedingly numerous at Crossgates, no less than 114 examples being recognised. They were also extremely plentiful on the *Signal Stations* sites (Pl. ii, nos. 3, 6 & 8; Fig. 11. nos. 1-7) and are known to have been produced at *Knapton* (Fig. 30, nos. 15-18) and probably at *Crambeck* (1928, pl. VIII, nos. 195-202), but the type is so common in the north that other unknown kilns must have manufactured this cookpot. It is securely dated to the late 4th century during which period it appears to have completely replaced the cruder cookpot of Type 1E.

The typical "Huntcliff Cookpot" possesses a well-marked groove on its thickly-lobed and outbent rim. The shoulder is well-pronounced and, although the body is often undecorated, it usually possesses horizontal grooves and frequently wavy lines below the shoulder. Examples decorated on top of the rim are classed separately as Type 1B.

The majority of the Crossgates examples are in dark grey, coarse fabric well mixed with calcite-grit, but considerable variations in ware and colour occur. With regard to the sizes of the vessels, it is of interest to note that 80% of the rim diameters fall within two ranges: — 6-7″ and 10-12″. The distribution of type among the Crossgates localities is as follows: No. 2 (fifty-two examples), No. 4 (forty-four), No. 15 (two), No. 17 (one), No. 35 (one), No. 41 (one) and No. 51 (six). One example is figured

(three were previously figured in *Crossgates* 1948, Fig. III, nos. 22-24) and a few of the variations to the normal fabric and form are listed below:

1A/1 (fig.). Brown to dark grey, decorated with four girth grooves and double wavy lines. Diam. 10″. From 4.
1A/2. Smooth, hard, pinkish-cream ware, unpitted. Diam. 11″. From 2.
1A/3. Brick-red with grey core, pitted. Diam. 12″. From 2.
1A/4. Reddish-cream, pitted. Grit includes ironstone. Diam. 12″. From 2.
1A/5. Buff to dark grey, pitted. Neck pierced by a bored perforation ⅛″ diam. Diam. of rim 12″. From 2.

TYPE 1B. The "Huntcliff Cookpot" with decoration to rim top.

Jars of the "Huntcliff Cookpot" type with decoration on the top of the rim, in addition to the groove found on the interior, are unknown from the Signal Stations, although they are recorded from two East Riding sites. One example from *Rudston* (1936, Fig. III, no. 4) possesses a double row of incisions and sixteen rims found at *Elmswell* near Driffield (1937 Fig. 6, no. 1) were decorated with a wavy line, which was regarded as possibly a type peculiar to the site. However five rims from Crossgates have been discovered with the wavy-line decoration and two with finger-nail impressions.

1B/1 (fig.). Grey ware, pitted, very hard, wavy line on top of rim, finger-nail impressions under rim. Diam. 12″. From 4.
1B/2 (fig.). Dark grey, pitted. Finger-nail decoration on upper surface of rim. Diam. 10″. From 4.
1B/3. Sandy-cream rim. Small, faint wavy line on top of rim. Diam. 9″. From 4.
1B/4. Light grey fabric. Wavy line on top of rim. From 4.
1B/5. Dark grey rim. Wavy line on top. Diam. 12″. Find-spot unknown.
1B/6. Dark grey rim. Wavy line on top. Diam. 10″. From 51.
1B/7. Buff to grey rim. Finger-nail decoration on top. Diam. 10″. From 51.

TYPE 1C. "Huntcliff Cookpot" type jar with little or no shoulder.

A dozen rims occurred of the "Huntcliff Cookpot" type (with internal groove) from jars possessing little or no shoulder. The fabrics and grits were identical with Type 1A. No decoration is present on the Crossgates sherds but a complete profile is lacking. An example from *Langton* (Fig. 27, no. 101) possesses girth-grooves and a wavy line. The rim diameters indicated that the type falls largely within the lower of the two Type 1A size ranges— 6-7″.

Type 1C does not appear to have been distinguished previously and it may be a little earlier than Type 1A, as, although almost entirely restricted to a 4th century hut-site at Crossgates, it is not recorded from the Signal Stations.

1C/1 (fig.). Sandy grey, pitted. Diam. 4½″. One of eleven rims from 4.
1C/2 (fig.). Dark grey, pitted. Diam. 7″. From 40.

TYPE 1D. "Huntcliff Cookpot" type jar without internal groove to rim.

The internal groove, which is a distinctive feature on the typical "Huntcliff Cookpot" rims, is missing from five examples from Crossgates. These may be a little earlier in date, although it should be noted that a few rims of Type 1D occurred on the Signal Stations (*Huntcliff*, Fig. 40, no. 22 and *Signal Stations*, p. 243). Others have been figured from *Crambeck* (1928, Pl. VIII, no. 209), *Langton* (Fig. 27, nos. 111-3), *Rudston* (1936, Fig. III, no. 3) and *York, St. Sampson's Square* (Fig. 7, nos. 9 & 10).

1D/1 (fig.). Dark grey, decorated with three parallel grooves below shoulder. Diam. 7″. Find-spot unknown.
1D/2 (fig.). Grey, undecorated. Diam. 4·5″. From 4.
1D/3 (fig.). Grey, undecorated. Diam. 7″. Find-spot unknown. Two similar rims from 4 and 51.

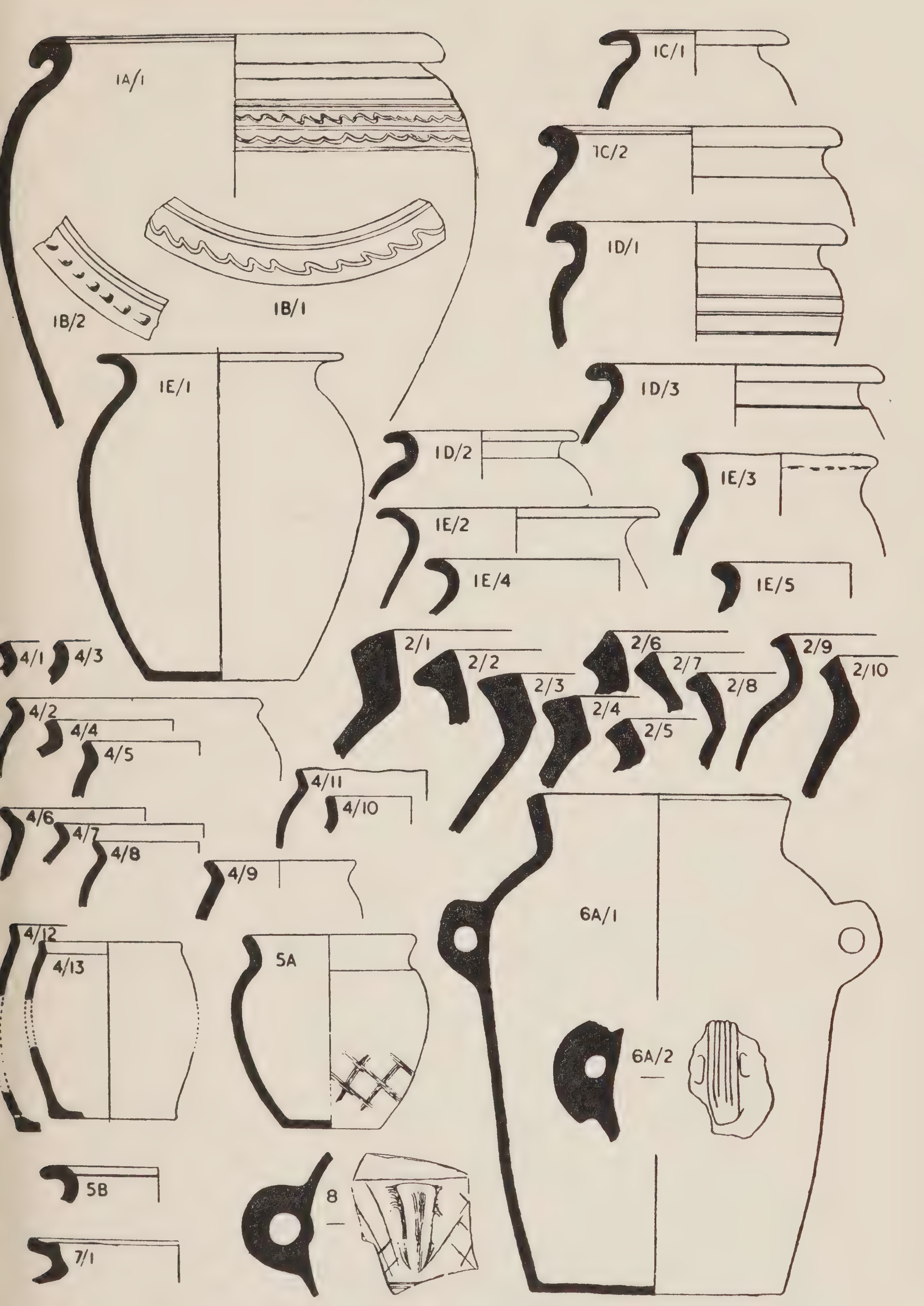


Fig. 10. Romano-British Pottery: Types 1A to 8 (Scale ¼).

TYPE 1E. Plain calcite-gritted jar with rounded out-bent rim.

This jar, which is of simple form and undecorated, may have replaced the "Knapton type cookpot" (Type 2) and represent the fore-runner of the "Huntcliff cookpot." The ware is identical with the latter and the rounded outbent rim, without an internal groove, is usually wheel-turned. The diameter of the rim usually falls within the 5″—7″ range. In all instances the body of the pot is hand-made, plain and shoulderless. Published local parallels appear to be scarce but several examples have been noted from *Crambeck* (1928, Pl. VIII, nos. 210-2), and it is fairly well represented on the Wall during the first two-thirds of the 4th century (e.g. *Bewcastle,* no. 72; *Poltross Burn.* Pl. V, no. 8; *High House,* Pl. XVIII, no. 122; *Carrawburgh,* no. 43). It can be assumed to have had a life which terminated before the occupation of the Signal Stations.

Type 1E jars were obtained from the following localities at Crossgates: No. 1 (seven examples), No. 2 (seven), No. 4 (one). Five examples have been illustrated.

1E/1 (fig.). Restored hand-made jar in light grey to buff ware. Unpitted. Diam. 5·7″. Height 7·7″. Find-spot unknown.
1E/2 (fig.). Buff to dark grey, pitted, hand-made. Finger-nail impressions under lip of rim. Diam. 6·5″. From 1. Similar example from 2.
1E/3 (fig.). Pink to dark brown, pitted, hand-made. Finger-nail impressions below lip of rim. Diam. 4·5″. From 2. Also a second example from 2.
1E/4 (fig.). Grey, pitted, wheel-made rim. Diam. 7″. From 4. Also three similar examples from 2 and three from 1.
1E/5 (fig.). Buff to grey, pitted wheel-made rim. Diam. 6·5″. From 2. Similar example from 1.

TYPE 2. Knapton type cookpot.

A large hand-made jar with a roughly formed outbent rim with a rectangular section but which varies considerably in thickness and angle. Normally in a dark brown or dark grey calcite-gritted ware, but the fabric also varies considerably. The type obviously has its origin in the Iron Age (see *Costa Beck,* Fig. 1; *Thornton-le-Dale,* Fig. 2), but continued in use until the 4th century A.D. It was completely replaced in the late 4th century by the "Huntcliff Cookpot." The "Knapton Cookpot" appears to have been plentiful only in eastern Yorkshire and is known to have been produced in great numbers at *Knapton* itself (Fig. 30, nos. 1-6). It is tentatively included with the Norton kiln products (Fig. 11, nos. 8 a-b) but was undoubtedly manufactured at other unknown kiln-sites in this region.

The Crossgates excavations disclosed forty examples of rims referable to Type 2 from the following localities: No. 1 (two examples), No. 1A (two), No. 2 (two), No. 3 (two), No. 5A (ten), No. 13 (two) and from unknown find-spots (twenty). The distribution indicates that the majority of the Crossgates rims are early in date. One distinctive variety is of such frequency on the 1st century sites that a period 70-100 A.D. is suggested for this form, profiles of which can be observed in Figs. 2/1, 2/3 & 2/4. These disclose the characteristic rectangular section but the rims are exceptionally heavy, with a thickness (about one inch) exceeding up to three or four times that of the walls. Certain rims from the ditches of the early fortlet at *Langton* (Fig. 7) show resemblances to this variety.

The following are illustrated:

2/1 (fig.). Dark brown, unpitted. Diam. 15″. Find-spot unknown. Similar examples from 3 and 5A.
2/2 (fig.). Buff to grey, pitted. Diam. 9″. From 5A.
2/3 (fig.). Greyish-buff, unpitted. Diam. 13″. Find-spot unknown.
2/4 (fig.). Greyish-buff, pitted. Diam. 12″. From 5A.

2/5 (fig.). Dark grey, unpitted. Find-spot unknown.
2/6 (fig.). Buff to grey, pitted, containing large calcite and flint grit. Diam 15″. (Cf. *Langton*, Fig. 7, No. 43). From 1A, similar example from 5A.
2/7 (fig.). Dark grey, pitted. Diam. 13″. (Cf. *Thornton-le-Dale*, Fig. 2, No. 3). From 1, similar example from 5A.
2/8 (fig.). Dark grey, pitted. Diam. 8″. (Cf. *Thornton-le-Dale*, Fig. 2, Nos. 1 and 5). From 1.
2/9 (fig.). Hard, pinkish-buff with grey core, unpitted, thin-walled. Diam. 5½″. (Cf. *Knapton*, Fig. 30, No. 2). Find-spot unknown.
2/10 (fig.). Dark grey, pitted. Diam. 15″. (Cf. *Knapton*, Fig. 30, No. 8). From 3. Another similar example from 5A.

TYPE 3 (*Signal Stations* Type 25). Neckless cookpot.

A single example of this type of vessel occurred at Crossgates. The form had a long life extending from the Early Iron Age into the pagan Anglo-Saxon Period. The hand-made, beadless rim examples from Crossgates have all been placed under Type 30 of the Anglian pottery but possibly several could be regarded as Romano-British.

3 (figured *Crossgates, 1948*, Fig. III, No. 21). Beaded rim. Dark grey. Smoked outside. Diam. 5″. From 2.

TYPE 4. Small jar of "Brigantian" type.

A group of eleven short outbent rims, obtained chiefly from the infilling of the 1st century ditch, can conveniently be placed under this heading. They are hand-made in heavily gritted, buff to black ware. The profile appears to possess a weak curve, the shoulder is unpronounced, and it is usually difficult to ascertain the angle and diameter from the rim fragments. In the list given below two categories have been recognised but no chronological or cultural significance is drawn from this distinction.

(a) Small jars with squared rims. (Cf. *Stanwick*, Fig. 12, Nos. 15 and 16).
4/1 (fig.). Black exterior, reddish-buff interior. From 1.
4/2 (fig.). Dark grey to black, heavily pitted. Diam. 7″. May be a bowl. (Cf. *Stanwick*, Fig. 12, No. 15). From 1A.
4/3 (fig.). Dark grey. From 1.
4/4 (fig.). Dark grey, very pitted. Diam. 6″. Find-spot unknown.
4/5 (fig.). Dark grey exterior, grey interior. Coarse gritted. Diam. 5½″. (Cf. 4/2 above). From 4.
(b) Small jars with rounded rims. (Cf. *Stanwick*, Fig. 12, No. 24; *Traprain Law*, Fig. 55, No. 2; *Costa Beck*, Fig. 1, No. 9). Two similar jars from Staxton, E.R., are also included below.
4/6 (fig.). Black exterior, buff interior. Diam. 7″. From 1.
4/7 (fig.). Black exterior, reddish-buff interior. Diam. 7″. From 1.
4/8 (fig.). Black, burnished exterior. Diam. 5″. May be a bowl. From 1A.
4/9 (fig.). Dark grey, reddish-buff interior. Very pitted. Diam 4″. Find-spot unknown.
4/10 (fig.). Black. Diam. 4″. From 4.
4/11 (fig.). Reddish-buff to dark grey, hard fine gritted ware. Crudely made. Diam. 6″. From 3.
4/12 (fig.). Buff gritted ware, darkened on exterior, unpitted. Diam. uncertain. From the Romano-British site at Staxton, E.R.
4/13 (fig.). Light grey to buff ware, heavily charged with calcite grit, unpitted, sooted on exterior. Diam. of rim 3¼″. Diam. of base 3″. Height from conjectural restoration 4″. From Staxton, E.R.

TYPE 5A (*Signal Stations* Type 24). Small jar with rounded outbent rim in gritted ware.

This form in coarse grey to black gritted ware was very plentiful on the Scarborough site (*Signal Stations*, Pl. ii, no. 7; Fig. 9, nos. 4-14). The condition of the Scarborough sherds suggested to Hull that they belonged to the earlier part of the occupation of the station. The Crossgates examples were of similar ware and size.

5A/1 (fig.). Restored jar with lattice decoration on lower half. Wheel-turned rim on hand-made base. Dark brownish-grey ware. Height 4·5″. Diam. 3·8″. From 4.
5/A2. Rim of very hard black fabric, sharply outbent, decorated with diagonal lines below neck. Diam. 4·5″. (Cf. *Signal Stations*, Fig. 9, No. 7). From 4.
5A/3. Rim of hard grey ware. Diam. 4·5″. From 4.
5A/4. Rim of black ware. Diam. 5″. From 4.
5A/5. Slightly outbent rim, black exterior, sandy-grey interior. Diam. 4·25″. (Cf. *Signal Stations*, Fig. 9, No. 6). From 4.
5A/6. Rim in sandy-grey ware with black interior and exterior, burnished below neck and on interior of rim. Diam. 3·75″. From 3.

TYPE 5B (*Signal Stations* Type 21). Small jar with rounded outbent rim possessing internal groove.

A rare type on the *Signal Stations* (Fig. 9, nos. 1-3) and at Crossgates, where only one specimen can be recognised.

5B (fig.). Rim of sandy-grey ware, pitted. Diam. 5·5″. Find-spot unknown.

TYPE 6A. Jar with applied loop handles and squared rim.

A type of jar not previously described and no close parallel occurs to the sole Crossgates example. It bears some superficial resemblance to a type of loop-handled jar from the 3rd century *Norton* kilns (Fig. 10, nos. 4a & 4b) but this is, of course, wheel-made in " Norton Type " grey ware. Reference can be made to a loop-handled, calcite-gritted jar from the *Rudston* villa (1936, Fig. IV, no. 1) which has been assigned to a "Pre-Roman" date. However we make the tentative suggestion that the Crossgates vessel belongs to the first two-thirds of the 4th century. The two handles (6A/2 & 6A/3) have been added below on the assumption that they belong to jars of type 6A.

6A/1 (fig.). Restored hand-made jar with square lip to almost upright rim. Grey ware with black to buff exterior. Calcite and spar grit. Very pitted. Applied loop handles with central vertical groove. Diam. 6″. From 6.
6A/2 (fig.). Looped handle probably from similar vessel to 6A/1. Grey ware with buff exterior. Large spar grit. Crudely made. Vertical scorings on face of handle. From 3.
6A/3. Lower half of looped handle, similar to 6A/2. With sharp vertical scorings on face. From 12.

TYPE 6B. Jar with applied loop handles with heavy rounded rim.

A large jar, obviously related to the "Huntcliff Cookpot" but with two applied loop handles, appears to be unique, as similar handled jars from Scarborough (*Signal Stations*, Pl. ii, no. 1) possess countersunk handles. However there is no doubt that both forms are referable to the late 4th century.

6B (figured *Crossgates 1948*, Fig. III, No. 20). Large jar in very hard nearly black ware with coarse grit including small pebbles. Crudely inscribed horizontal wavy line between handles. Diam. 7″. From 2.

TYPE 7. Jar with outbent rim possessing shallow internal depression.

A few rims of this type, which were probably intended to receive lids, were present at Crossgates in grey ware. The form, in ware of a similar colour, has been found in 3rd century deposits at *Malton* (Fig. 6, no. 7 and Fig. 14, no. 18) and at *High House* (Pl. XVIII, nos. 117-118) on Hadrian's Wall.

7/1 (fig.). Dark grey pitted ware. Diam. 7″. From 1A.
7/2. Light grey, fine grit. Diam. 6″. Find-spot unknown.
7/3. Dark grey, gritted ware, with rough surface. Diam. 7″. From 1.
7/4. Coarse grey heavily gritted but unpitted ware. Diam. 7½″. Find-spot unknown.
7/5. Reddish-grey ware. Diam. 7″. Find-spot unknown.

TYPE 8. Honey-pot.

A single sherd of this barrel-shaped jar possessing applied loop handles and attributed to the Ist century, was recovered at Crossgates. A restored example is figured from *Langton* (Fig. 26, no. 99).

8 (fig.). Hard grey ware, small lattice pattern decoration. Find-spot unknown.

TYPE 9A. Thin-walled hand-made jar with upright rim.

Four hand-made rims in thin black heavily calcite-gritted ware were obtained from the upper deposit in the 1st century ditch at 1A. Close parallels from local Iron Age and Romano-British sites have not been published but from their association with pottery of types 2 & 4, a 1st century date appears likely.

9A/1 (fig.). Black to brown interior, dark buff exterior. Diam. 10″. From 1A.
9A/2 (fig.). Diam. 7″. From 1A.
9A/3. Dark grey exterior. Very small fragment. From 1A.
9A/4. Diam. 6″. From 1A.

TYPE 9B. Thick-walled hand-made jar with upright rim.

Only two examples of rims from this type of vessel were discovered, both in coarsely gritted ware with reddish-buff exteriors — distinctly Iron Age 'A' in character. One, however, came from the upper infilling of the 1st century ditch at 1A in association with pottery Types 2, 4 & 9A. The second example, with shallow cabling on the rim was unstratified and in view of this form of decoration, which was a feature of a number of rims from the transitional Late Bronze Age/Iron Age A site at Scarborough (*Archaeologia.* Vol. LXXVII, Fig. 39 & Pl. XXI, no. 3). an earlier date has to be considered. Jars with cabled rims are known to have survived much later in the Iron Age (e.g. Abington Piggots, *P.P.S.E.A.* iv, 223-4, fig. 2E, G), and the continued use of this decoration into the first century A.D. is not unlikely.

An example from Staxton with a somewhat similar profile has been added to the Crossgates specimens listed below; and others are known from *Thornton-le-Dale* (Fig. 2, no. 11).

9B/1 (fig.). Pitted grey coarsely gritted ware with reddish-buff exterior. "Thumbing" around exterior of rim, a feature of several rims from *Stanwick* (Fig. 12, Nos. 2, 6, 8 and 13). Diam. 7″. From 1A.
9B/2 (fig.). Similar ware, unpitted, with reddish-buff interior and exterior. Faint cabled pattern on lip of rim. Diam. 12″. Find-spot unknown.
9B/3 (fig.). Dark brown, heavily charged with calcite grit, slightly pitted. Diam. 8″. From the Romano-British site at Staxton, E.R.

TYPE 10A (*Signal Stations* Type 1; *Crambeck* Type 3). Jar with countersunk handles and upright grooved rim in grey ware.

A common 4th century form, manufactured at *Crambeck* (1928, Pl. IV, nos. 80-5) and frequent at Malton, Langton and Scarborough. Represented at Crossgates by rims and decorated wall fragments of about nine vessels. One rim is illustrated.

10A (fig.). Diam. 5½″. From 4. Other examples from 2 (one), 29 (one) and from unknown find-spots (six).

TYPE 10B (*Signal Stations* Type 2; *Crambeck* Type 3A). Jar with countersunk handles and upright grooved rim in grey ware.

A type related to 10A but with a straight upright or slightly outbent rim with a groove below the lip. It was scarce at *Crambeck* (1928, Pl. IV, no. 88) and uncommon at Malton and Langton but on the Signal Station sites it proved more plentiful than Type 10A. Only two examples occurred at Crossgates.

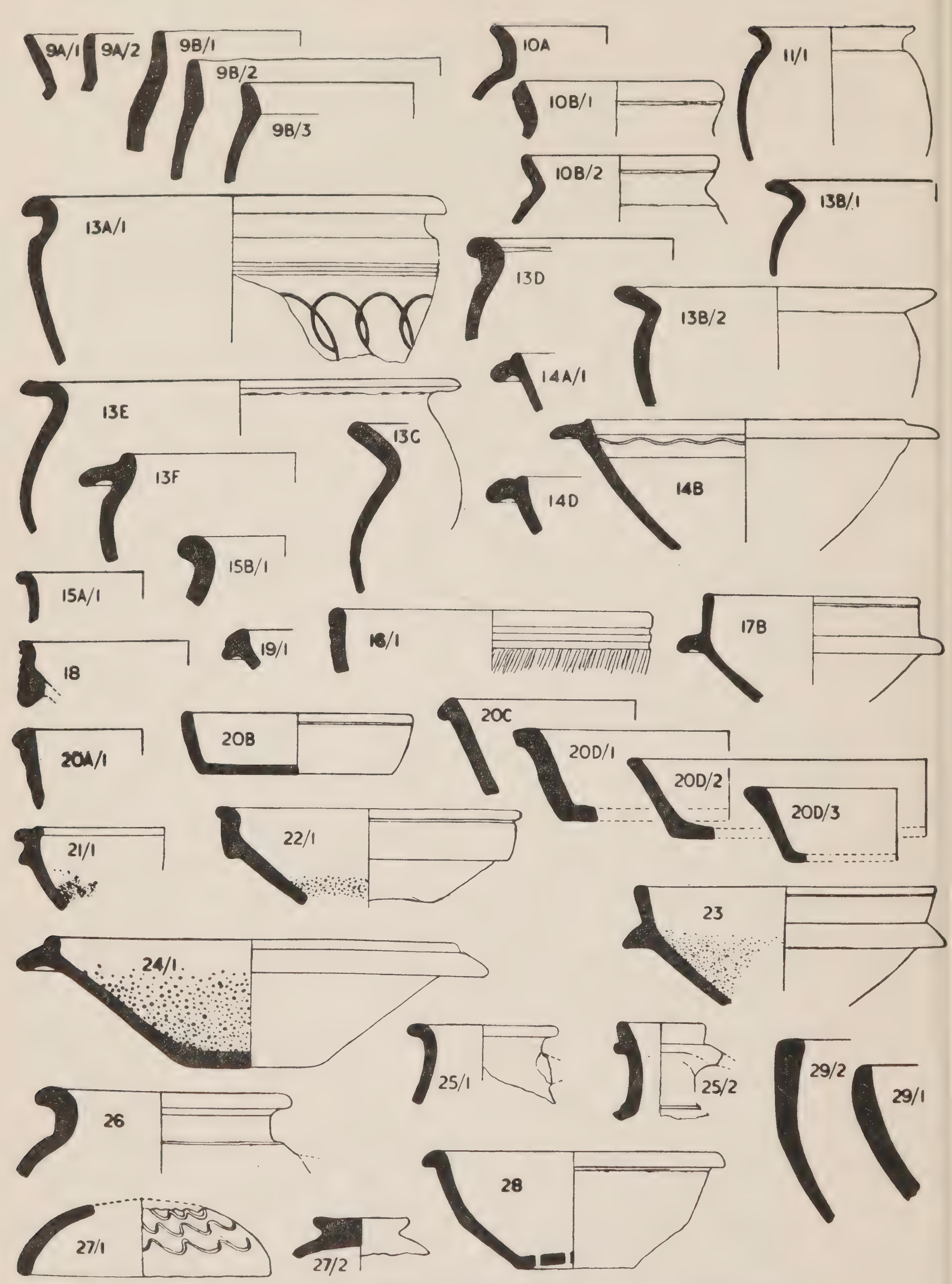


Fig. 11. *Romano-British Pottery*: *Types* 9A *to* 29 (*Scale* ¼)
N.B.—The numbers 25/2 & 26 should be transposed.

10B/1 (fig.). Light sandy-grey rim. Diam. 5″. (Cf. *Signal Stations*, Fig. 2, No. 8). From 4.
10B/2 (fig.). Dark grey rim. Diam. 4½″. Find-spot unknown.

TYPE 11 (*Crambeck* Type 11; *Norton* Type 5). Small jar in grey ware.

These small jars with obliquely out-bent rims, globular bodies, slightly raised and often heavy bases and footrings, possess thin walls and a diameter of the base less than that of the mouth. Usually decorated with grooves on shoulder and a zone of lattice or chevrons on the body. Produced at the *Crambeck* (1928, Pl. IV, nos. 89-92) and *Norton* kilns (Fig. 10, no. 5), but the type is uncommon. Present at Malton and Langton but unknown from the Signal Stations and can be regarded as having its origin in the 3rd century but falling into disuse by about 370 A.D. The following six examples were found at Crossgates.

11/1 (fig.). Light sandy-grey rim. Diam. 3·9″. Find-spot unknown.
11/2. Complete base, diam. 2·4″, with very thin walls. (Cf. *Crambeck 1928*, Pl. IV, No. 90). Find-spot unknown.
11/3 (figured *Crossgates 1948*, Fig. III, No. 8). Hard grey-ware rim. From 2.
11/4 (figured ibid. Fig III, No. 9). Hard sandy-grey ware rim. From 2.
11/5 Grey ware rim. Diam. 5″. (Cf. *Crambeck 1928*, Pl. IV, No. 90). From 4.
11/6 Part of base with moulded foot. Diam. 2·8″. With hole 0·75″ diam., perforated in centre, possibly to form a loom-weight. From 1A.

TYPE 12 (*Signal Stations* Type 36). Very large storage jar.

A rare form in which the rim profiles vary considerably. The two Crossgates examples are in Huntcliff type ware, as are specimens from Scarborough and Filey (*Signal Stations* Fig. 15, nos. 1-3) and from the Langton Villa and Ulrome sites (*Langton*, Figs. 28 & 29).

12/1. Grey gritted ware rim fragment, with groove on rim and high shoulder. Diam. 14″. From 4.
12/2. Dark grey gritted ware rim fragment, with deep wide groove on rim. Diam. 13″. Find-spot unknown.

BOWLS

TYPE 13A (*Crambeck* Type 4; *Norton* Type 6). Deep wide-mouthed bowl in grey ware without internal groove to rim.

Usually in grey ware smoothed on rim and shoulder. The rim varies considerably but is usually heavy and the diameter exceeds that of the body. Some examples have a clearly-marked shoulder. The normal decoration is a burnished wavy line or a series of intersecting arcs bounded by one or more girth grooves around the body.

It is a northern form which can be dated to the period *circa* 250-370 A.D. At *Malton* it is recorded from a late 3rd century deposit (Fig. 6, no. 23) and before A.D. 370 (Fig. 5, no. 1). It is plentiful at *Crambeck* (1928,, Pl. VI, nos. 142-159; 1937, fig. 2, no. 4) and at *Throlam* (Fig. 11) but the type is uncommon at the *Norton* kilns (Fig. 10, no. 6 a-c).

The following three examples were discovered at Crossgates:

13A/1 (fig.). Light grey, decorated with two girth grooves below shoulder followed by an unburnished panel containing intersecting arcs. Lower part burnished. pronounced shoulder. Diam. 10″. (Cf. *Crambeck 1928*, Pl. VI, No. 142). From 1A.
13A/2. Grey ware rim with well-marked rounded shoulder. Diam. 10″. Probably from Crambeck kilns. Find-spot unknown.
13A/3. Light grey ware rim from a shoulderless bowl. Diam. 8″. Kiln doubtful. Find-spot unknown.

TYPE 13B (*Signal Stations* Type 27 in part). Deep wide-mouthed bowl in calcite-gritted ware without internal groove to rim.

Similar to Type 13A but in calcite-gritted ware. An uncommon form of which several examples were found at the Goldsborough and Scarborough *Signal Stations* (Pl. ii, no. 11; Fig. 11, no. 8), one at *Crambeck* (1928, Pl. VIII, no. 213), one at *Elmswell* (1937, Fig. 7, no. 27), and two at *Langton* (Fig. 27, nos. 118-9). The Crossgates specimens are shoulderless but from other sites pronounced shoulders often occur and the latter is probably a late feature. The type probably had a life extending from the 3rd century into Signal Station times.

13B/1 (fig.). Black gritted ware rim, pitted. Diam. 8″ From 1. (Rim resembles several of Type 1E, see Fig. 1E/4).
13B/2 (fig.). Dark grey exterior, reddish-grey interior, wheel-made rim, hand-made body. Traces of vertical finger-smoothing on interior of body. Faint shallow depression around top of rim. Angle between rim and body acute. Diam. 7½″. From 1.

TYPE 13C (*Signal Stations* Type 27, in part). Deep, wide-mouthed bowl in calcite-gritted ware with internal groove to rim.

A form identical to Type 13B but possessing an internal groove to rim. Appears to be restricted to the Signal Station period (A.D. 370-400), but only a few examples have been recorded (*Signal Stations,* Fig. 11, nos. 9 & 10), although fragments of the rim alone are impossible to distinguish from the characteristic Huntcliff cookpot (Type 1A). Only two examples have been identified at Crossgates, both from a 4th century hut-site:

13C/1 (figured *Crossgates 1948,* Fig. III, No. 13). Very dark-grey. Grit, pitted. Diam. *c.* 11·5″. From 2.
13C/2 (figured *ibid,* Fig. III, No. 12). Thick coarse ware, exterior very dark brownish-grey to dirty pink. Copious grit, much pitted. Diam. 14-15″. From 2.

TYPE 13D. Deep wide-mouthed bowl in black ware with internal groove.

This bowl in hard black ware is probably a form intermediate between Type 13A and 13C and datable to the period *c.*A.D. 350-370. It possesses a wheel-finished rim upon a hand-made body. Examples are rare but have been recorded from *Crambeck* (1928, Pl. VI, no. 166 or *Signal Stations,* Fig. 12) and *Cawood* (Fig. 2, no. 12). One rim was obtained at Crossgates.

13D (fig.). Hard black ware with pronounced shoulder. Diam. 11″. Find-spot unknown.

TYPE 13E. Deep wide-mouthed bowl with groove on top of rim.

This single example from Crossgates appears to be unique. It is probably late 4th century in date.

13E (fig.). Very hard grey ware, with wheel-made rim on hand-made body. Shallow wide groove on top of rim. Finger-nail impressions under tip of rim. Diam. 10·25″. From 4.

TYPE 13F. Deep wide-mouthed bowl with flanged rim.

Apparently another unique example, also late 4th century in date. The rim alone is undistinguishable from that of Type 14C.

13F (fig.). Dark grey gritted ware, pitted. Diam. 10″. From 4.

TYPE 13G. Deep wide-mouthed bowl with squared rim.

This possesses the fabric and rectangular outbent rim identical with the Knapton type jar (Type 2). A single specimen has been restored (*Langton,* Fig. 27, no. 123) and is in the Malton Museum, but the form is rare, although several from *Langton* (Fig. 27, nos. 124-5) and *Knapton* (Fig.

30, nos. 7-9) may belong to this type of vessel. One example has been obtained from Crossgates.

13G (fig.). Hard grey gritted ware, unpitted. Diam. 14″. Find-spot unknown.

TYPE 14A (*Signal Stations* Type 7, in part; *Crambeck* Type 1). Straight-sided flanged-rim bowl in grey ware without internal wavy line decoration.

A form which is said to have had its origin early in the 2nd century, but it came into prominence in the late 3rd century and continued in use to the end of the 4th century. In the north it is plentiful on late sites and represents nearly half of the output of the *Crambeck* kilns (1928, Pl. I, ons. 1-16). For the purpose of this list four sub-types are recognised; Type 14A in grey ware without internal wavy-line decoration; Type 14B in the same ware but possessing wavy-line decoration; Type 14C in calcite-gritted ware and Type 14D in Castor Ware.

Ten examples of Type 14A occurred at Crossgates, varying in diameter from 7 to 12 inches. They were found in localities No. 1 (three examples), No. 4 (three), No. 55 (one), and from unknown find-spots (three). One is illustrated.

14A (fig.). Light grey ware. Diam. 7″. From 4.

TYPE 14B (*Signal Stations* Type 7, in part; *Crambeck* Type 1B). Straight-sided flanged-rim bowl in grey ware with internal wavy-line decoration.

This is the same ware as Type 14A but the interior of the bowl is decorated with a scored wavy line. About half the products of straight-sided flanged-rim bowls at *Crambeck* (1928, Pl. 1, nos. 1 & 2) possess this feature, which was almost unknown before the excavation of the *Scarborough* signal station (Fig. 4, no. 1), where a half-dozen specimens occurred. Other finds from late sites in the North (e.g. *Birdoswald*, Fig. 16, no. 87) suggest that it was a characteristic adopted in the late 4th century. Five examples were found at Crossgates, all from 4th century hut sites—two from No. 2 (figured in Crossgates 1948, Fig. III, nos. 4 & 5) and three from No. 4, one of which is illustrated in this paper:

14B (fig.). Light grey ware. Diam. 9″. From 4.

TYPE 14C (*Signal Stations* Type 28). Straight-sided flanged-rim bowl in calcite-gritted ware.

A coarse version of the flanged-rim bowl which appears in small quantities in the late 4th century (*Signal Stations* Fig. 4, no. 2 & Fig. 13, nos. 1, 3, 4 & 5, *Elmswell* 1937, Fig. 5, no. 9). Only one has been discovered at Crossgates;

14C (figured *Crossgates 1948*, Fig. III, No. 11). Burnished black, large grit, pitted. Diam. 8½″. From 2.

TYPE 14D. Straight-sided flanged-rim bowl in Castor ware.

The flanged-rim bowl occasionally occurs in Castor ware in the late 4th century (*Scarborough* Signal Station, Fig. 1, no. 1; *York, St. Sampson's Square*, Fig. 7, no. 20). Other examples are known from *Elmswell* (1937 Fig. 7, no. 26) and *Cawood* (Fig. 2, no. 3). One (Fig. 14D) was obtained at Crossgates.

TYPE 15A (*Crambeck* Type 13a). Small bowl with wide neck.

A form in grey or brown ware, produced at *Crambeck* (1928, Pl. II, nos.

37-42) before *circa* 370 A.D., possibly derived from Samian form 37. Four examples were recorded from Crossgates;

15A/1 (fig.). Grey-ware rim. Diam. 6″. From 1.
15A/2. Dark grey with lighter core. Diam. 8″. From 1.
15A/3. Light grey. Diam. 7″. From 1.
15A/4. Buff-grey. Diam. 6″. Find-spot unknown.

TYPE 15B (*Crambeck* Type 13). Small bowl with strongly everted rim.

Another form produced at *Crambeck* (1928, Pl. II, nos. 30 & 34) before *circa* 370 A.D., and also not common. In thick grey or brick-red ware. Two specimens were found at Crossgates;

15B/1 (fig.). Hard grey-ware rim. Diam. 5″. Find-spot unknown.
15B/2. Similar. Diam. 5·5″. From 1.

TYPE 16. Hemispherical bowl in Flavian red ware.

Hemispherical bowls in Flavian red ware occurred at the earliest period of the *Malton* fort (Fig. 14, no. 33 & Fig. 17, no. 11).

16/1 (fig.). Rim in red ware with pale grey core. Two grooved encircling lines ¼″ below rim followed by rouletting on body. (Cf. *Malton*, Fig. 14, No. 33). Diam. 7·5″. From 3.
16/2. Small fragment similar to last. From 5A.

TYPE 17A (*Crambeck* Type 5; *Signal Stations* Type 6 in part).

Hemispherical bowl with flanged body in red ware.

An imitation of Samian form 38 manufactured at *Crambeck* (1928, Pl. I, nos. 18 & 19) in hard red ware. Examples are uncommon but a restored specimen from the *Scarborough* signal station (Fig. 3, no. 4) is in the Scarborough Museum. Fragments of two of these bowls were discovered at Crossgates in a 4th century hut-site (No. 2) but are too small for illustration.

TYPE 17B (*Crambeck* Type 5b; *Signal Stations* Type 6 in part).

Hemispherical bowl with flanged body in yellowish-white ware.

Similar to Type 17A but in hard yellowish-white fabric. Usually painted but unpainted specimens are common. Sometimes provided with grit as a mortar (see Type 23). *Crambeck* (1928, Pl. II, nos. 24-29) is the only known source of this type which has a wide distribution in the North and can be securely dated to the late 4th century. One example was present at Crossgates;

17B (fig.). Yellowish-cream, external groove below rim. Wall ribbed below flange, neck and flange decorated with brown paint. Diam. 5″. From 4.

TYPE 18 (*Signal Stations* Type 8, *Crambeck* Type 9). "Wall-side" bowl.

A type produced at *Crambeck* (1937, Fig. 3, no. 9) in the late 4th century and, although widely distributed in the North, it is not plentiful. It is in buff ware and often painted. Only one small fragment was discovered at Crossgates:

18 (fig.). Pink-buff rim. Diam. 8″. Find-spot unknown.

TYPE 19 (*Crambeck* Types 10 & 10a; *Signal Stations* Type 15). Large Shallow Bowl.

This type of large bowl, which occurs in a variety of wares, but when in smooth creamy-white ware is usually painted, is also a late 4th century product of the *Crambeck* kilns (1928, Pl. III, Figs. 58-73; 1937, Fig. 3, nos. 10 & 10a). It is widely distributed in the North. Four examples were present at Crossgates.

19/1 (fig.). Rim fragment in brick-red ware. Diam. 13″. From 1.
19/2 (figured *Crossgates 1948,* Fig. III, No. 7). Hard smooth pale-buff ware, blackened outside. Diam. 9·5″ — 10″. From 2.
19/3. Cream ware with pink core, body fragment. From 4.
19/4. Hard dark grey ware with thick pale buff slip inside. From 2.

DISHES

TYPE 20A (*Crambeck* Type 2; *Norton* Type 1; *Signal Stations* Type 17 in part). Straight-sided dish in grey ware.

This type, which is of frequent occurrence, possessed a long life and is of no value for dating purposes. It was a plentiful product of the kilns at *Crambeck* (1928, Pl. III, nos. 50-1) and *Norton* (Fig. 10, nos. 1a-b) but was infrequent at Scarborough (*Signal Stations,* Pl. ii, no. 5 & Fig. 4, no. 4). Varieties occur with concave sides (see nos. 20A/1 and 20A/2 below) and convex sides (see 20A/3 below) but these features do not appear to have any chronological value. Six examples of Type 20/A were found at Crossgates:

20A/1 (fig.). Grey with dark-grey interior and exterior. Heavy rim with strongly ribbed walls. Diam. 6″. From 4.
20A/2. Light grey with concave sides. Diam. 4·5″. (Cf. *Signal Stations,* Fig. 4, No. 5). From 4.
20A/3 (figured in *Crossgates 1948,* Fig. III, No. 6). Hard, light grey with convex side. Diam. 12″. From 2.
20A/4. Light grey straight-sided. Diam. 6″. From 39. Two other straight-sided examples from 2.

TYPE 20B (*Crambeck* Type 2a, *Signal Stations* Type 17 in part). Straight-sided dish in grey ware with external groove.

Identical to Type 20A but with a groove immediately below rim on the outside of the wall. Very plentiful at *Crambeck* (1928, pl. III, nos. 52 & 53) and less frequent at the *Norton* kilns (Fig. 13, nos. 1d, f, h). One occurred at Scarborough (*Signal Stations,* Fig. 4, no. 6) but four were present at Crossgates (three from Hut No. 4 and one from an unknown find-spot). One has been figured:

20B (fig.). Restored dish in grey ware. Diam. 5·4″ From 4.

TYPE 20C (*Norton* Type 2). Straight-sided dish in grey ware with lip.

A single example of this type was present at Crossgates but it is a type not produced at Crambeck and unknown on the Signal Stations. It is, however, a common product of the 3rd century kilns at *Norton* (Fig. 10, nos. 2a-b & Fig. 13, nos. 2 c-f) and was present in the 3rd century carbonised-wheat layer at *Malton* (Fig. 6, no. 28).

20C (fig.). Grey ware. Diam. 9″. From 4.

TYPE 20D (*Signal Stations* Type 31). Straight-sided dish in calcite-gritted ware.

Crossgates produced sixteen specimens of this type of vessel both wheel and hand-made, showing considerable variation in form, ware and size. Examples occurred with walls curving inwards (*Crossgates* 1948, Fig. III, no. 16) and outwards (*ibid*. Fig. III, no. 18) and with mouldings on the exterior (see 20D/1 below) and on the interior of the rim (*ibid* Fig. III, no. 19 and cf. *Signal Stations,* Fig. 14, no. 4). Others possessed plain rounded rims (*Crossgates* 1948, Fig. III, no. 17 and cf. *Signal Stations,* Fig. 14, no. 1), flat-tipped rims (see 20D/2 below) and thickened rims (see 20D/3 below). No chronological significance has been placed on the possession of these characteristics.

The Crossgates specimens were distributed among the following localities: No. 1A (one), No. 2 (four), No. 3 (one), No. 4 (four), No. 13 (one), No. 35 (one), No. 51 (one) and from unknown find-spots (three) Three have been selected for illustration:

20D/1 (fig.). Black pitted ware, wheel-made. Diam. 10″. From 13.
20D/2 (fig.). Black pitted ware, hand-made. Diam. 14″. From 1A.
20D/3 (fig.). Black pitted ware, wheel-made. Diam. 7″. Find-spot unknown.

MORTARIA

TYPE 21 (*Signal Stations* Type 11; *Crambeck* Type 8). Small painted mortar with double-flanged rim.

A type with a distinctive profile, securely dated to the Signal Stations period (*circa* 370-400 A.D.) with *Crambeck* (1928, Pl. V, nos. 137-141) as its only known source. Produced in smooth white or creamy-buff ware with fine black grit and often decorated with orange-red paint. Widely distributed in the North. Seven of these mortars have been recognised at Crossgates. three, from the hut-site no. 2, have already been figured (*Crossgates* 1948, Fig. III, nos. 1-3).

21/1 (fig.). Cream ware, fine black grit. Diam. 7″. From 4.
21/2. Cream ware rim. Diam. 9″. (Cf. *Signal Stations,* Fig. 8, No. 3). From 4.
21/3. Cream ware rim. Diam. 8″. From 4.
21/4. Complete base in cream ware, 2½″ in diam., with fine black grit. Probably Type 21. From 3.

TYPE 22 (*Signal Stations* Type 10; *Crambeck* Type 7). Small painted "wall-side" mortar.

Another mortar in creamy-buff or white ware with *Crambeck* (1928, Pl. V. nos. 130-3) as its only known source of manufacture and dated to the late 4th century. It is also widely distributed in the North. Four examples have been found at Crossgates:

22/1 (fig.). Sandy-cream with black grit. Wall ribbed below rim. No trace of paint but may have worn off. Diam. 7″. (Cf. *Signal Stations,* Fig. 7, No. 5). From 4.
22/2. Pale pink, unmoulded rim with groove immediately below. Fine grit. Diam. 7·5″. (Cf. *Crambeck, 1928,* Pl. V, No. 130). Find-spot unknown.
22/3. Rim in reddish-cream. Diam. 11″. Find-spot unknown.
22/4. Rim reddish-buff inside and out, grey core, fine grit, well-worn. Diam. 11″. From 41.

TYPE 23. Hemispherical Mortar with flanged body.

An uncommon form of the late 4th century which has developed from Type 17B and was probably made at Crambeck. Examples are known from *Brough* (1934, Fig. 7, no. 11), and *Malton* (Fig. 21, no. 3). One occurred at Crossgates:

23 (fig.). Rim in cream ware, black grit extending up to rim. Diam. 7″. From 4.

TYPE 24 (*Crambeck* Type 6). Hammerhead Mortar.

This type of mortar with its prominent grooved flange at angle to body was a common product of the *Crambeck* kilns (1928, Pl. V, nos. 100-124) and well-known on the Wall from the very end of the 3rd century to *c.* 367 A.D. (e.g. *Poltross Burn,* Pl. V, nos. 1-4; *Bewcastle,* no. 15; *Birdoswald,* no. 11). It is entirely absent on the Yorkshire Signal Stations and it appears to have been replaced by Types 21 and 22 in the late 4th century. Only two examples can be recorded for Crossgates:

24/1 (fig.). Cream ware, black grit. Diam. 11″. From 51.
24/2. Part of rim in cream ware. Three grooves on rim. Diam 10″. From 51.

JUGS AND FLAGONS

TYPE 25. Jugs.

Remains of jugs and flagons were scarce at Crossgates. Only two examples of the former could be identified, both in hard grey "Norton type" ware, although published parallels from these kilns are lacking. There is a possibility that they were produced at *Throlam* (Fig. 15). In either case they can be dated to the second half of the 3rd century.

25/1 (fig.). Top of hard grey ware jug, small rounded shoulder with out-curved rim. Stump of handle below rim. Diam. 3·5″. (Cf. *Throlam*, Fig. 15, No. 95). From 41.

25/2 (fig.). Top of hard thick sandy grey ware jug, rounded shoulder with out-curved rim. Small moulding below neck. Stump of handle. Diam. 6″. From 2.

TYPE 26. Flagon.

A portion of a single flagon in "Norton type" ware is probably a variant of *Norton* Type 7 and datable to the second half of the 3rd century.

26 (fig.). Neck of flagon in hard grey ware. Upright rounded lip. Wide moulding ⅝″ below rim. Concave neck of 1½″, terminating in a small moulding. Handle attached to upper moulding. Diam. 2″. Find-spot unknown.

LIDS

TYPE 27 (*Signal Stations* Type ?5). Jar lid in calcite-gritted ware.

Two fragments of jar lids occurred at Crossgates, the first probably belonging to a "Huntcliff cookpot" (Type 1A) and the second to a "Knapton cookpot" (Type 2).

27/1 (fig.). Pitted brownish ware decorated with four parallel wavy lines. Diam. of base *c.* 6″. (Cf. *Elmswell, 1937,* Fig. 6, Nos. 2 and 3; *Signal Stations,* Fig. 13, No. 10; *Rudston, 1936,* Fig. III, No. 10). From 4.

27/2 (fig.). Very hard dark grey ware. Small hole in side. (Cf. *Knapton,* Fig. 30, Nos. 11-14). Find-spot unknown.

COLANDER

TYPE 28. Colander in grey ware.

A single vessel of this class, in grey ware of the Crambeck type, was present at Crossgates. Colanders were not found at the Crambeck kilns but Mr. R. H. Hayes informs us that fragmentary colanders from Norton (unpublished) were almost certainly made at Crambeck. This type of vessel in a somewhat similar grey ware and similar in form, was produced at *Throlam* (Fig. 12, nos. 45 & 46).

28 (fig.). Restored colander in hard grey ware. Base perforated with nine holes (approx. ⅛″. diam.). Height 2⅞″. Diam. 7″. Find-spot unknown.

UNCLASSIFIED MISCELLANEOUS SHERDS

29/1 (fig.). Rim fragment, sandy-coloured interior, dark-grey to black exterior. Distinct traces of flat instrument used in shaping vessel. Pitted. Diam. *circa* 12″. Find-spot unknown. (? Romano-British).

29/2 (fig.). Rim fragment buff to grey, unpitted, calcite-gritted. Crudely hand-made. Diam. *c.* 10″. Find-spot unknown. (? Romano-British).

29/3 Portion of handle of early-type amphora. From 1.

29/4. Fragments of Castor ware beakers too small for reconstruction were present at the following localities at Crossgates: No. 1 (two sherds), No. 2 (two), No. 4 (five), No. 26 (one), No. 36 (one) and No. 38 (one). Castor ware sherds are not infrequent on local sites (e.g. *Malton,* p. 70; *Scarborough,* p. 223; *Rudston* 1936 Fig. III, No. 20; *Elmswell* 1938, Fig. 10, No. 62), but its long life (late 2nd century to late 4th century) is not useful for dating purposes.

29/5. Only two small fragments of Rustic ware were present at Crossgates and these were from the excavation of the 1st century ditches at 1 and 3. Jars with "rustic" decorated bodies are of common occurrence on 1st century sites in the north, *Brough* (1936, Fig. II, No. 23); *Langton* (Fig. 7, Nos. 1 and 2); *Elmswell* (1938, Fig. 8, No. 1), and *Malton* (Fig. 1, No. 16; Fig. 16, No. 10; Fig. 17, No. 18) all produced examples.

29/6. Fragment of cream base of mortar, with large black grit. From 35.

29/7. Brick-red fragment of mortar, with black grit. From 29.

29/8. Base fragment from a heavy pale brick-coloured mortar with large well-worn black grit. An early type, probably 1st or 2nd century. Find-spot unknown.

II. ANGLIAN POTTERY

Almost the entire collection of pottery of Anglian date came from the north-east and south-east areas of Field B—from the areas which produced contemporary hearths and huts. The extension of gravel workings in this field continues to reveal further Anglian material and, in view of this, it would be considered premature to make a detailed study and comparison of the Anglian pottery types at this stage. This must be left to a second and perhaps final report on the Crossgates excavations, by which time it is hoped that other local 5th-6th century pottery will have been published. At present we will give little more than a factual description of the finds together with notes on the forms of decoration and the types of ware.

WARE

Two main divisions embrace most of the varieties of fabric employed in the manufacture of the Anglian vessels used at Crossgates. (1) A smooth ware. usually black or very dark in colour, with fine crystalline grit. (2) A coarse, more heavily gritted ware, also black or dark in colour, the grit often including calcite and sometimes consisting of fine gravel. Biotite is frequently present in this fabric and its appearance is often a useful indication of the date of an otherwise indeterminate sherd, as it has not been observed in any local Romano-British ware. Its occurrence has also been noted in Anglian pottery from Staxton, Flixton and Wykeham (Scarborough Museum collections).

One additional fabric, so outstandingly distinguishable, is restricted to a single sherd of a large decorated jar (No. 34/2). It is exceedingly hard, black in colour, with very fine crystalline grit. No comparable sherds of this ware have been noted from local sites.

DECORATION

About one quarter of the Anglian vessels found at Crossgates are decorated. The various forms of decorations can be divided as follows:

(1) Applied.
- (a) Bosses. Only a single wall fragment (No. 36/4) possesses a rounded boss.
- (b) Lugs. One plain narrow lug (No. 33/2) and one perforated narrow lug (No. 33/3) occur.

(2) Incised.
- (a) Horizontal grooves occur on at least six vessels (Nos. 33/1, 34/1, 34/5), some narrow and deeply incised (e.g. No. 34/2) and others shallow and broad (e.g. No. 34/3).
- (b) Chevrons and inverted 'V's are to be found on one large jar (No. 34/2).
- (c) Short, faint, vertical grooves in groups of three occur on two vessels (Nos. 34/6 & 34/7).

(3) Impressed.
- (a) Star-like impressions include those with square-ended rays (No. 34/1), commonly found on urns from *Sancton* (Figs. 9a, 21a, 22a, 23a), and roughly-pointed rays (Nos. 34/4 & 34/6).
- (b) Four-petalled rosettes. Found on one sherd (No. 33/4).
- (c) "Cross in circle" impression is to be seen on two vessels (Nos. 33/1 & 33/4).
- (d) A line of crosses of double parallel lines occurs on one jar (No. 34/2).
- (e) Concentric circle impression on one sherd (No. 33/4).
- (f) Flat circular depressions occur on one vessel (No. 33/2).
- (g) "Stabbed" impressions. A line of deep round holes is to be found on one pot (No. 34/5).
- (h) Finger-tip impressions. A line of these depressions occur on the neck of one large jar (No. 34/3).

TYPE 30. Small neckless jar.

Over one-third of the Anglian pots found at Crossgates fall within this category. They are usually crudely made, cup-shaped and undecorated. The rim is upright and possesses a rounded lip. In most instances fine grit is used and the surface pitting is slight or non-existent. No example was found sufficiently complete for restoration and owing to the difficulty of establishing the angles and diameter with accuracy, the profiles must be regarded as approximations.

In shape, size and ware several of the Crossgates pots are almost identical with examples from a cemetery at Robin Hood's Bay (in possession of the Yorkshire Museum). Similar pots were found with inhumations at Staxton (Scarborough Museum Acc. Nos. 205.47 and 208.47), at Driffield (*Mortimer,* Nos. 860-1) and at *Hornsea* (Fig. XXV).

30/1 (fig.). Buff to grey exterior, black interior. Large mixed grit. Uneven slightly pitted surface. Diam. 6·5″. From 40.
30/2 (fig.). Brown to black exterior, black interior. Large mixed grit. Uneven slightly pitted surface. Faint shallow indefinite groove under lip of rim. Diam. 5·5″. From 1A.
30/3 (fig.). Brown to black burnished exterior, black interior. Gritted. Biotite present. Diam. 6″. From 43. Another similar rim from 26.
30/4 (fig.). Hard, slightly pitted grey ware with crystalline grit. Black exterior, brick-red interior. Diam. 7″. From 29.
30/5 (fig.). Black ware with crystalline grit. Diam. 5″. From 26.
30/6 (fig.). Rim with indefinite bead. Grey ware with calcite grit. Pale brick-red interior and exterior. Pitted. Diam. 5·5″. From 26.
30/7 (fig.). Black with fine crystalline grit. Exterior burnished. Diam. 4″. From 23.
30/8 (fig.). Black, gritted ware. Biotite present. Unpitted. Diam. 6″. From 33.
30/9 (fig.). Brown to black exterior, black interior. Fine crystalline grit. Uneven slightly pitted surface. Indefinite bead. Diam. 6″. From 43.
30/10. Rim fragment similar to No. 30/6 but in black pitted ware. Diam. 4·5″. From 33.
30/11. As last but in black unpitted ware. From 38.
30/12. Rim fragment in brown to black ware. Gritted, biotite present. Diam. 6″. From 52.
30/13. Small rim fragment in black unpitted ware. From 45. Similar fragment from 53.
30/14. Rim fragments in brown to black ware. Fine crystalline grit. Unpitted. Diam. 7″. From 55.
30/15. Rim fragment in buff to brown ware. Gritted with fine gravel. Pitted. Diam. 4″. From 55.

TYPE 31. Small plain jar with outbent rim.

A form allied to Type 31, but with a weakly outbent rim. Usually globular in shape and rounded at the base. Similar vessels are known from

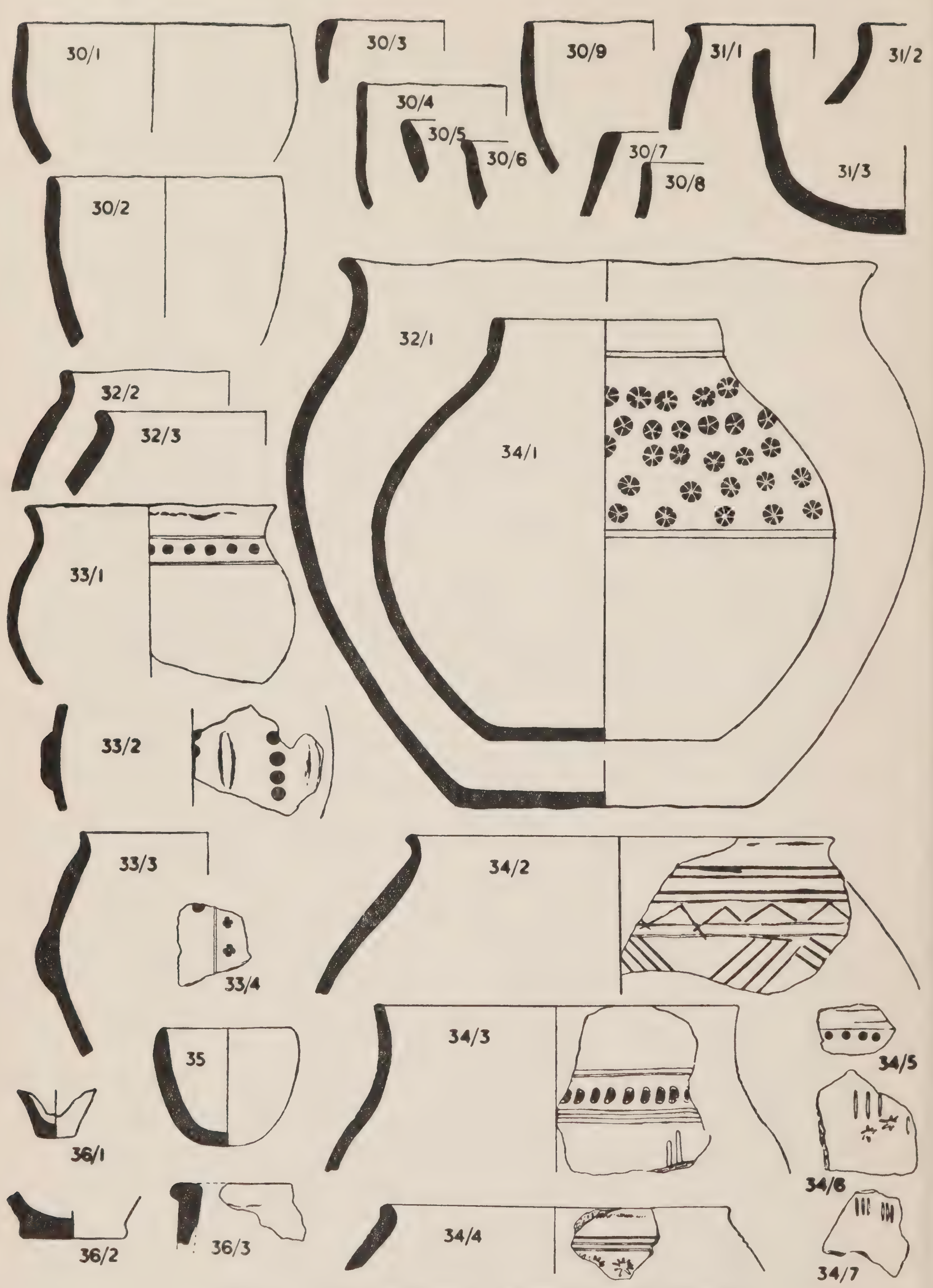


Fig. 12. Anglian Pottery: Types 30 to 36 (Scale $\frac{1}{4}$).

East Yorkshire cemeteries (e.g. *Sancton*, Figs. 25 & 28; *Hornsea*, Fig. XXVII).

31/1 (fig.). Buff to black with crystalline grit. Unpitted. Squared rim. Diam. 6″. From 38.
31/2 (fig.). Black to brick-red ware with fine crystalline grit. Unpitted. Diam. 6″. From 26.
31/3 (fig.). Rounded base of globular vessel probably with outbent rim. Coarse thick brown to black ware, heavily gritted with fine gravel. Pitted. From 25.
31/4. Small rim fragment in black ware. Cf. 31/2 above. From 30.
31/5. Small rim fragment. Black exterior, brick-red interior. Mixed grit. Unpitted. From 32.
31/6. Rim fragment. Buff to black ware. Gritted with fine gravel. Biotite present. Unpitted. Diam. 7″. From 55.

The following fragments can be included under this type with probability.
31/7. Part of rounded base in coarse dark grey heavily gritted ware. Grit includes calcite. Biotite present. Slightly pitted. From 43.
31/8. Wall fragment in smooth thin black ware. Unpitted. From 26.
31/9. Wall fragment in thick heavily gritted ware. Dark grey with light brown exterior. From 26.
31/10. Wall fragment in thick black finely gritted ware. Unpitted. From 35.

TYPE 32. Large plain jar with outbent rim.
A large version of Type 31.

32/1 (fig.). Restored jar in greyish-brown calcite-gritted ware. Height 13″. Diam. 12·5″. From 17.
32/2 (fig.). Brown to brick-red ware with mixed grit. Slightly pitted. Diam. 9″. From 26.
32/3 (fig.). Black exterior, grey-buff interior. Mixed grit. Biotite present. Unpitted. Diam. 8″. From 1A.
32/4. Base of large jar probably of this type. Coarse dark grey ware, heavily gritted with calcite, etc. Unpitted, brown to reddish-buff exterior. Biotite present. From 50.

TYPE 33. Small decorated jar.
Bulbous in form with short neck and weakly everted rim. The types of decoration employed have already been noticed.

33/1 (fig.). Dark grey gritted ware. Biotite present. Decorated with line of stamped-impressed crosses between two horizontal grooved lines. Diam. 6″. From 43.
33/2 (fig.). Black unpitted ware. Decorated with small vertical lugs and vertical lines of flat circular depressions. From 53.
33/3 (fig.). Black ware with fine crystalline grit. Unpitted. Vertical lug (probably one of four) perforated with a minute hole. Diam. 6″. From 26.
33/4 (fig.) Small wall fragment in grey soapy fabric with calcite and other grits. Decorated with grooved line, stamped-impressed rosettes and concentric circles. From Field B.

TYPE 34. Large decorated jar.
This type includes the larger jar upon which some form of decoration has been employed. As with the smaller decorated examples the rim is weakly everted and the neck usually short. The body of the pot is bulbous (cf. *Sancton*, Pl. III, Nos. 4, 5, 7; Figs. 9, 13, etc.), but the widely distributed angular type which is also present in East Yorkshire cemeteries (e.g. *Sancton*, Pl. III, No. 2; Figs. 18-20, 22; *Mortimer*, No. 894) has not been recognised at Crossgates.

34/1 (fig.). Restored jar in dark grey ware. Decorated with horizontal grooves around neck and girth. Upper half decorated with stamp-impressed "stars." Height 9·75″. Diam. 5·25″. Cf. *Sancton*, Fig. 9. From 17.
34/2 (fig.). Very hard black ware with very fine crystalline grit. Unpitted. Decorated with horizontal grooves, chevrons and stamp-impressed crosses. Vessel well-made but decoration appears to have been applied hastily. Diam. 10″. From 36.

34/3 (fig.). Black, heavily gritted with calcite. Biotite present. Decorated with line of finger-tip impressions between double encircling grooved lines. Traces of vertical grooves which may have formed part of shield-shaped panels (a jar from the Robin Hood's Bay cemetery, now in the Yorkshire Museum, with an identical finger-tip decoration, possesses shield-shaped panels outlined by double grooved lines and filled with stamp-impressed crosses). Diam. 8-9″. From 43.

34/4 (fig.). Dark grey with grit which includes calcite. Biotite present. Decorated with encircling grooved lines and star-like stamp impressions. Diam. 8″. From 21.

34/5 (fig.). Wall sherd in grey, heavily gritted ware. Grit includes calcite. Biotite present. Decorated with grooves and "stabbed" impressions. From 1A. Also a second sherd from 1A with similar decoration.

34/6 (fig.). Wall sherd in fine black gritted ware. Grit includes calcite. Biotite present. Decorated with faint vertical grooves and star-like impressions. From Field B.

34/7 (fig.). Wall sherd in black to reddish-grey gritted ware. Decorated with faint vertical grooves. From 29.

TYPE 35. Small plain beaker.
Probably a small version of Type 30.

35 (fig.). Restored beaker in dark greyish-brown ware. Rounded base. Height 2·75″. Diam. 3·5″. From 15.

TYPE 36. Unclassified sherds.
All from hand-made vessels.

36/1 (fig.). Fragmentary base with diam. only $\frac{7}{8}$″. Coarse dark brown calcite-gritted ware. From 26.

36/2 (fig.). Base with diam. 2·5″. Dark brown with unburnt chalk grit. Slightly ledged. Burnished wall. (May well be Romano-British). From 1.

36/3 (fig.). Two rim sherds in grey gritted ware. Grit includes calcite. Biotite present. Brick-red inside and out. Unpitted. Diam. c. 10″. Angle uncertain. May not be Anglian but note presence of biotite. From Field B.

36/4. Wall sherd with part of embossment. Hard dark-brown ware with fine grit. Biotite present. Unpitted. From 38.

III. OTHER ARTEFACTS

BRONZE OBJECTS

37/1 (fig.). Spoon, pear-shaped, rat-tailed. Length 6·5″. From 1. Roman period.

37/2 (fig.). Large pin with point missing. Present length 4·15″. Decorated on face and sides with incised lines. Plain reverse. From near 4. ? Roman period.

37/3 (fig.). Buckle, double-looped type, with pin and most of one loop missing. Original length 2″. From 44. Mediæval.

37/4 (figured *Crossgates 1948,* Fig. IV, No. 1). Bracelet, fragment. From 2. Roman period.

37/5 (figured *ibid,* Fig. IV, No. 2). Bodkin, fragment. From 2. Roman period.

IRON OBJECTS

38/1 (Plate IIC). Sword. Overall length 25·8″, tang 4·3″. Width of blade 1·5″. From 1st century ditch. Roman period.

38/2 (Plate IID). Blacksmith's Tongs. Length 29·7″. From 1st century ditch. Roman period.

38/3 (fig.). L-shaped slide-key. Length 4·3″. From Field B. Roman or Anglian periods. Cf. *London Mus. Roman Cat.* Pl. XXXA, No. 3 ; *Langton,* Fig. 21, Nos. 2 and 3 ; Jessup, "Anglo-Saxon Jewellery", London, 1950, Fig. 7.

38/4 (fig.). Hook-shaped key or girdle-hanger with ring. Length (without ring) 7·4″. From 53. Anglian. Cf. *Hornsea,* Fig. XIX ; *Newbald,* Fig. 6 ; *Mortimer,* Figs. 781 and 854.

38/5 (fig.). Hook-shaped key. Length 7·7″. From 26.

38/6 (fig.). Knife, with long tang. Part of blade missing. Length 8″. Roman period. From 4.

38/7 (figured *Crossgates 1948*, Fig IV, No. 6). Knife. Roman period. From 2.
38/8. Knife, with tang missing. Length 2·85″. From 26. Probably Anglian.
38/9. Knife, only small part remaining. Length 2·1″. From near 40. Probably Anglian.
38/10 (figured *ibid. 1948*, Fig. IV, No. 7). Linch pin ?, part of. From 2.
38/11. Nail, length 1·5″. Diam. of head 0·7″. From 51.
Several nails were found at 2.

SPINDLE WHORLS

39/1 (fig.). Whorl in shale. Diam. 1·4″. From 24.
39/2. Whorl made from limestone pebble. Diam. 1·2″. Probably from near 1A.
39/3. Whorl made from a sherd of grey Crambeck ware. Diam. 1·4″. From 5. (A similar whorl in grey Crambeck or Norton ware was found near Pasture Lane, Seamer, Nat. Grid Ref. TA/020828, by J. P. Robinson, Esq., in 1954, Scarborough Museum No. 685.54.)
39/4. Portion of small bone whorl, burnt. Diam.1·1″. From 51.

LOOM WEIGHTS

Annular loom weights of light reddish-brown baked clay occurred at Crossgates. The type is of frequent occurrence on early Anglo-Saxon sites.

40/1 (fig.). Almost complete. Diam. 3·8″. From 4.
40/2. Almost complete. Diam. 4″. From Field A.
40/3 Half. Diam. 3·8″. From 17.
40/4. About one-quarter. Diam. *c.* 4·5″. From Field B.
40/5. About one-third. Diam. *c.* 4·5″. From 5.

ROTARY QUERNS AND MILLSTONES

41/1 (fig.). Upper stone of beehive quern in gritstone. Diam. 14″. Find spot unknown.
41/2 (fig.). Fragmentary upper quern stone of lava. Diam. 14·25″. From 16. (For petrological report on this specimen see Appendix II).
41/3 (fig.). Two fragments of upper millstone of gritstone. Diam. 25″. From 26.
41/4. Upper stone of beehive quern in limestone. Diam. 14″. Height 5·1″. From 4.
41/5. Fragment of upper stone of quern in limestone. Diam. *c.* 16″. Thickness 2·25″—2·5″. From 26.
41/6. Fragment of millstone in gritstone. Diam. uncertain. From 4.
41/7. Fragment of second millstone in gritstone. Diam. uncertain. From 4.
41/8. Lower stone of quern. Flat base, slightly concave upper surface. Diam. *c.* 14″. Find-spot unknown.
41/9. Fragment of upper millstone in gritstone. Diam. uncertain. From 55.

STONE HAMMERS

42/1 (fig.). Grooved hammer in sandstone. Length 4·3″. From 5A.
42/2. Elongated Carboniferous Limestone pebble (probably from the Glacial Drift), with one end heavily abraded. Length 5·7″. Find-spot unknown.

WHETSTONES

These are elongated pebbles obtained from the Glacial Drift, bearing evidence of use from sharpening of metal tools (cf. *Elmswell* 1937, Pl. IIB).

43/1 (fig.). Sandstone, cylindrical-shaped. Length 4·75″. From 4.
43/2. Flattened pebble of Carboniferous Limestone. Length 4·5″. From 4.
43/3. Similar to 43/2. Length 5·5″. From Field D.
43/4. Cylindrical pebble of soft limestone. Length 5·6″. Find-spot unknown.

OTHER STONE OBJECTS

44/1. Bowl-shaped object in sandstone, with hole in base. Height 11″. Diam. 18″. Diam. of hole 4″. Use unknown. Interior unworn and bearing chisel marks, so suggested use as mortar unlikely. From 4.

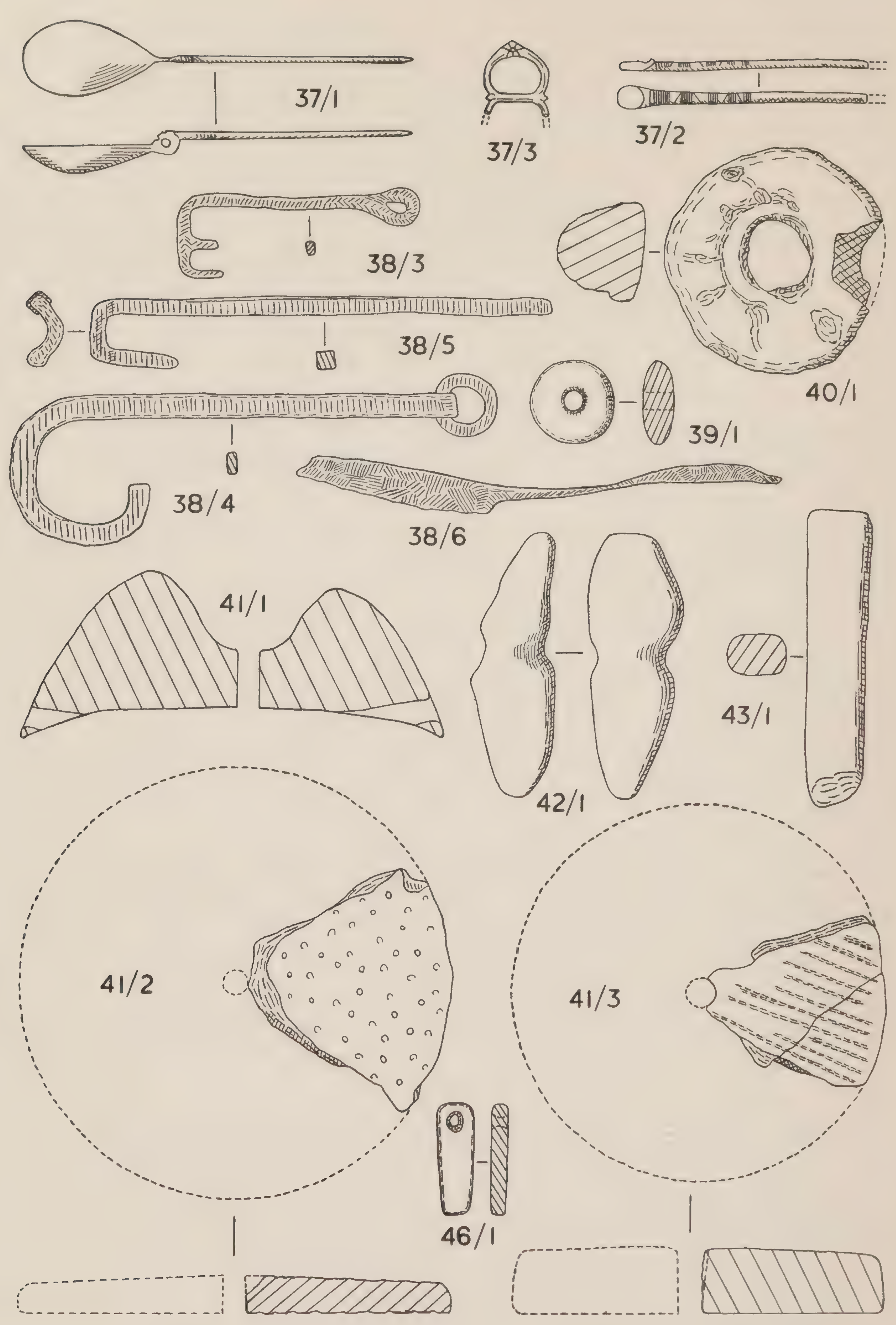


Fig. 13. Various finds. (*Scale* 1/3, *except* 41/1 (1/6), 41/2 (1/6), *and* 41/3 (1/12).

44/2. Shallow sandstone trough-like object, possibly a mortar. Length 26·75″. Width 14″. Thickness 6″. Interior 1·5″—2″ deep. From 4.
44/3. Two limestone balls. Diam. 5·5″ and 6″. Probably ballista balls. From unknown find-spots.

TILES

Fragments of roofing tiles occurred in the following localities: No. 1 (one), No. 2 (several), Field H (one), No. 23 (one), No. 39 (one), No. 51 (one).

GLASS BEADS

45/1 Complete. Yellow, red and dark-green banded. Diam. 0·7″. Thickness 0·6″. From 14. Anglian.
45/2. Blue. From 1 (lost). Probably Roman period.
45/3. Broken half. Yellow, dark-green and white banded. Diam. 0·6″. Thickness 0·5″. From 39. Anglian.
45/4. Broken half. Green and white banded. Diam. 0·6″. Thickness 0·2″. From 40. Anglian.

JET OBJECTS

Jet has been used locally for personal ornaments from Neolithic times. Objects of this material were fairly plentiful on the Iron Age 'A' site, Scarborough, and on Romano-British sites at Norton and Malton.

46/1 (fig.). Perforated pendant. Length 1·85″. Width 0·65″. From 32.
46/2. (figured *Crossgates 1948*, Fig. 4, No. 3). Hexagonal bead. From 2.
46/3 (*Ibid.*, Fig. IV, No. 4). Piece of polished jet. From 2.
46/4. Unworked fragments from 32 (one) and 4 (one).

COINS

Twenty-seven Roman coins were discovered at Crossgates, including a hoard of twenty-one, all falling between the end of the 2nd century and the end of the 4th.

HOARD FROM FIND-SPOT No. 46

All antoniniani, radiate bust right.

47/1—47/13. Tetricus I (c. 270—273 A.D.). Obv. IMP C TETRICVS PF AVG. Rev. PAX AVG. Pax 1.
47/14—15. Tetricus I. Obv. IMP C TETRICVS PF AVG. Rev. LAETITIA AVGG. Laetitia 1.
47/16—19. Almost certainly Tetricus I. Pax type (as above).
47/20. Almost certainly Tetricus I. Obv. IM[P C TETRICVS] PF AVG. Rev. SPES [PV]BLICA. Spes. 1.
47/21. Tetricus II (c. 270—273 A.D.). Obv. [C PIV ESV TETR]ICVS C[AES]. Rev. IL. Sacrificial instruments.

OTHER COINS

47/22. Probably Septimius Severus (193—211 A.D.), but certainly belonging to the period late 2nd—early 3rd centuries. AR denarius. From 22. Obv. Laureated bust of bearded emperor right. Legend illegible. Rev. Seated figure left. Legend illegible.
47/23. Carausius (287—293 A.D.) Æ antoninianus. From 26. Obv. Radiate bust of of emperor right. [IMP C] CARAVS [IVS PF AVG]. Rev. illegible.
47/24. Constantinopolis (c. 330—337 A.D.). Æ 3. From 4. Obv. CONSTANTINOPOLIS. Bust of Constantinopolis, left, helmeted, sceptre over shoulder. Rev. Victory standing left with spear and shield, right foot on prow of vessel. BSIS (Siscia Mint).
47/25. Probably Valens (364—378 A.D.). Æ 3. From 4. Obv. DN VA[. . . .] ? Bust right. Rev. SECVRITAS REPVBLICAE. Victory advancing left with wreath and palm. -OR.
47/26. Probably Valens (364—378 A.D.). Æ 3. From 4. Obv. [. . . .] VA[. . . .] Bust right. Rev. Legend illegible. Victory advancing left with wreath and palm.
47/27. Illegible, probably 4th century. Æ 4 (14 mm.). From 51.

LEAD COUNTER

A single lead counter was found on Hut-site No. 2 (figured *Crossgates* 1948, Fig. IV, no. 5).

FLINT IMPLEMENTS

These implements are of Glacial flint and probably indicate temporary occupation of the site in Neolithic and/or Bronze Age times.

48/1. Petit-tranchet arrow-head. Grey. Class C1. From 5.
48/2. Convex scraper, 0·8″ wide. Dark grey. From 26.
48/3. „ „ 0·9″ „ Grey. From Field B.
48/4. „ „ 1·5″ „ Dark grey. From 51.
48/5. „ „ 0·9″ „ Grey. From 51.
48/6. „ „ 1″ „ Dark grey. From 51.
48/7. „ „ 1·1″ „ Dark grey. From 51.
48/8. „ „ 1·5″ „ Grey. From 4.
48/9. Hollow scraper, 2·4″ in length. Light grey. From 51.
48/10. Worked flake, 3.2″ in length. Light grey. From Field B.
48/11. Core, 1.9″ high. Grey. From 51.

IV. ANIMAL REMAINS

FROM THE ROMANO-BRITISH SITES

Animal bones and teeth were present on most of the sites and were especially numerous in the Ditch Excavations 1 and 3 and in the Huts 2 and 4. The majority were broken and in a poor condition. Many were burnt. Probably all were from domestic animals as no undoubted remains of wild species were identified.

Shellfish were present in Hut 2 only.

OX

Numerous in deposits associated with Ditch Excavations 1 and 3, Huts 2 and 4 and Occupation Floor 5. About 70% of the identifiable remains were referable to the ox.

SHEEP

Present in deposits associated with Ditch Excavations 1 and 3, Huts 2 and 4. Represented about 20% of the animal remains.

PIG

Recorded from deposits associated with Ditch Excavations 1 and 3 and Hut 2. About 10% of the identified remains belonged to this species, which may have been wild or domesticated.

OYSTER (*Ostrea edulis*)

A single shell of the oyster was obtained from Hut 2.

MUSSEL (*Mytilus edulis*)

Many shells of the mussel were found in the Hut 2 deposits.

FROM THE ANGLIAN SITES

All the animal bones associated with the Anglian hearths and huts belonged to the four species Ox, Sheep, Pig and Horse and, with the exception of the pig which may have been a wild animal, they were from the domestic fauna of the settlement, and appear to represent the remains of beasts killed for food. Many of the bones were burnt and the majority broken. Animal remains were associated with 19 out of the 28 Anglian hearths and huts in Field B, but only in four cases were they present in very large numbers. In seven cases only a few were observed. Above the

Hearth No. 17 an almost solid layer of bones occurred with a maximum thickness of 15″ and containing a large number of sherds of Anglian pottery. Above Hearth No. 23 was a solid mass of bones up to 9″ thick and above Hearth No. 35 up to 5″ thick. As already stated the vast majority of the bones were fragmentary and it was only above Hearth No. 30 that a large proportion were discovered complete in a layer of bones 1′ 4″ - 1′ 2″ thick and about 4 ft. in diameter. It was chiefly from this deposit that a collection of complete bones were submitted to Mr. J. G. Speed, M.R.C.V.S., of the Dept. of Anatomy, Royal (Dick) Veterinary College, Edinburgh. Referring to this collection he states "My impression would be that here there is a larger-sized type of domestic fauna superimposed on a typical Celtic one."

OX

Remains of this species were very numerous in the deposits associated with Hearths Nos. 17, 23 & 30, plentiful at Nos. 19, 35 & 54 and present at Nos. 18, 21, 27, 28, 29, 31, 33, 34, 45, 48 & Huts 53 and 55. About 60% of the animal bones were referable to oxen. In connection with the bones submitted to him, Mr. Speed remarks that "The oxen are interesting. The smaller one appears to be the usual small Celtic ox, but there is also a larger animal represented, and an intermediate form."

SHEEP

Remains of sheep were few and only identified from the deposits associated with Hearths and Huts 17, 53 and 55. The species was unimportant in the economy of the Anglian inhabitants of Crossgates.

PIG

Pig, either wild or domesticated, was present in the deposits associated with Hearths Nos. 17, 23, 30 & 35, but the species only represented nearly 10% of the animal bones from the area.

HORSE

About 30% of the bones have been recognised as belonging to the horse. It was numerous at Hearths Nos. 19, 30 & 35 and present in smaller numbers at Nos. 17, 20, 33, 53 & 54. Referring to the bones forwarded for his attention, Mr. Speed states: "The pony is one of about 12.2 - 13 h.h., similar to the British Mountain ponies, and the horse about 15 h.h. The latter seems to show distinct oriental influence."

CONCLUSIONS

PREHISTORIC OCCUPATION OF CROSSGATES

The topography of the eastern end of the Vale of Pickering, in which the Crossgates site is situated, has been considerably modified by the action of ice in the Newer Drift Glaciation. The locality was actually one of the first in Britain to receive major attention in the study of the effect of ice-action (*Kendall* 1902). However the principal glacial feature with which we are concerned in this paper is the existence of an extensive zone of morainic mounds of sands and gravel which protrude above the general level of the valley and upon one of which the Crossgates settlement is to be found. These mounds have proved attractive dwelling places from early prehistoric times, as has been vividly disclosed by the excavation of the now famous Mesolithic site of Star Carr. Other mounds have produced material of the Neolithic and Bronze Ages. At Crossgates itself there is evidence, from the small collection of flint implements and the more extensive scattering of waste flakes and cores that the site has been used for flint-chipping purposes, probably in the Neolithic or Early Bronze Age. The raw material had been obtained from the local Glacial Drift and not from the chalk of the Wolds, which is of poor flaking quality.

Apart from the important transitional Late Bronze Age/Iron Age A site on the Castle Hill, Scarborough (Wheeler in *Rowntree* 1931), there is little in the neighbourhood of Crossgates to indicate that the district was of any importance in the pre-Roman Iron Age. The rather dubious "chariot-burial" that Mortimer records (1905, p.358) from the ballast pit at Seamer Station must have been obtained from the 19th century gravel-workings in Fields J or K (see Fig. 2) at Crossgates, but, in view of the recent discoveries in the adjacent fields, the "chariot-burial" may well have been connected with the Roman or post-Roman activities.

THE ESTABLISHMENT OF THE FORTLET

The Roman occupation of southern England found the eastern half of Yorkshire divided between the Parisi and the Brigantian tribes. The precise limits of their respective territories has not been defined but the former are known to have occupied a small compact region covering the greater part of the East Riding, with their capital, Petuaria, located on epigraphic evidence at Brough-on-Humber (*Corder* 1937). Northwards of the Wolds it cannot be asserted with confidence that the Parisi state extended to Malton and the Vale of Pickering, although the value of the latter as a frontier cannot be denied. In contrast to the Parisi, the state of Brigantia was of considerable size and strength, extending according to Ptolemy, at least from south Yorkshire into Co. Durham and from the Irish Sea to the North Sea (Richmond in *Stanwick*, pp. 61-2). However the frontier between the two peoples and the relationship prevailing in the 1st century A.D. is unknown.

From the beginning the Parisi appear to have been on friendly terms with the Romans, possibly fear of their powerful and war-like neighbours urged them to seek the protection of the Imperial forces. Their first contact with the Romans occurred around the middle of the 1st century, when the northern frontier of the Empire was advanced to Lincoln. In A.D. 71 Petillius Cerialis, legate of Vespasian, undertook the conquest of the Brigantes. Moving forward from the legionary fortress of Lincoln he crossed the Humber and established a base-camp at Petuaria, from whence the natural northward route was along the western scarp of the Wolds to Malton, where

an early permanent camp of pre-fort date has been discovered (actually at Norton, see *Gazetteer,* p. 113). At this stage, in order to consolidate his position, the Roman commander may have regarded the Vale of Pickering as the line of a temporary military frontier. If this occurred, the right flank, extending twenty miles from Malton to the sea, would require protection to counter infiltration from the northern moorlands to the Wolds. The section of the eastern half of the Vale of Pickering most readily crossed is undoubtedly situated between Willerby and Staxton on the south side and Seamer village and railway station on the north. In this rectangle a belt of low sand and gravel mounds, already mentioned, extends almost continuously across the valley, bisecting the present-day peaty "carrlands" which testify to what, until modern times, were the remnants of an ancient lakebed. It may be of interest to note that the York-Scarborough railway and the York-Scarborough Road (A64) both utilise this rectangular "bridge." Eastwards, the narrow and low coastal ridge of intractable boulder-clay offers no easy crossing. The establishment of an outpost to command the route across the vale would appear necessary if the temporary frontier based on Malton was adopted and the Crossgates fortlet seems to meet this requirement.

A few finds between Malton and Seamer indicate an early penetration of the area. From Binnington Carr near Willerby came a hoard of twelve silver coins of which the latest are Vespasian (*Gazetteer,* pp. 65-7). The occupation site at Spital corner, Staxton, has produced a Vespasian coin, Samian ware, "Brigantian" pottery (see Nos. 4/12, 4/13 and 9B/3 in this report), brooches and other relics of the 1st and 2nd centuries A.D. (brief note published in *Y.A.J.* XXXVII (1948), p. 116*. In view of its strategic position there is the possibility that the Staxton site was a further military post guarding the Vale of Pickering crossing.

The evidence supporting a short life for the Crossgates fortlet has already been discussed. It appears to have been slighted and abandoned within a few years, but the site continued to be inhabited.

THE NATIVE SETTLEMENT OF THE ROMAN PERIOD

The establishment of a native settlement at Crossgates probably occurred immediately after the disuse of the fortlet and was certainly established before the end of the 1st century. From that period there is no reason to suppose that the site was uninhabited before at least the end of the 5th century. It may be asserted from the pottery record that there is little or no evidence of occupation during the 2nd and early 3rd centuries. But a similar paucity of pottery is reflected at Malton where there is a corresponding gap from *c.* 120 to 220. Furthermore the "Knapton type" cookpot (Type 2) which was plentiful at Crossgates, is known to have had a life which overlapped the period in question and we have no evidence as to the date of the disuse of "Brigantian" Types 4, 9A & 9B, which in an area remote from centres of major Roman influence may have continued in production during the same period. Apart from the Staxton site already mentioned, in which occupation appears to have extended into the 2nd century, there is no evidence of any inhabited sites in the neighbourhood of Crossgates during the period 100 - 250 A.D. Actually only one occupation site in the area can be allocated to the succeeding period 250 - 370 A.D., namely that of Flixton (*Gazetteer,* p 84; pottery in Scarborough Museum), and it is not until the establishment of the Signal Stations that traces of extensive occupation appear.

From around the middle of the 3rd century to the end of the 4th, the pottery record shows that Crossgates was undoubtedly in continuous

* For report published since this paper was completed see *Y.A.J.*, XXXIX (1957), pp. 193-223.

occupation and, to judge from the quantity of the sherds and the variety of types, the settlement became progressively flourishing. The coin-hoard of Tetricus I and II may reflect the disturbances which resulted in the evacuation of the Malton fortress *circa* 280 A.D. However the only other coin hoard from around the period of Tetricus to have been found in eastern Yorkshire was a large one from Warter (*Gazetteer*, p.136). Coins of these emperors and their period represent over 10% of the number found at Malton.

The reoccupation of the Malton base *circa* 300 A.D. probably marks the beginning of a prosperous phase at Crossgates, for which pottery of the earlier Crambeck types is evidence. The disasters of 367 do not appear to have effected eastern Yorkshire and the establishment of the Signal Stations by Theodosius, *circa* 370, would seem to have erected an effective barrier against the barbarians. At Crossgates the general prosperity of rural life in the region is amply demonstrated by the great quantity of pottery of Signal Station types. The surrounding countryside was also effected by the favourable economic conditions, for occupation sites, producing late 4th century pottery have been discovered at Long Whins, Primrose Valley, near Filey (*Signal Stations*, pp. 220 & 250), Gristhorpe Bay (*Gazetteer*, pp. 85-6), and Flixton (see above). Small finds of pottery, chiefly of the same Signal Station types have also been found at Northstead (Scarborough Museum, unpublished), Wykeham (ditto) and Sherburn (*Gazetteer*, p. 128).

The peaceful conditions prevailing during the native occupation of Crossgates is shown by the lack of defences both natural and artificial. Apart from the 1st century ditched enclosure no trace of entrenchments or boundary walls have been disclosed.

The question now arises as to the principal occupations of the inhabitants of the settlement. The presence of a considerable number of querns and mill-stones is evidence that the growing and grinding of corn was an important task and probably the major industry of the inhabitants. This and other native settlements in eastern Yorkshire, together with the villas, may well have supplied the Roman forces with much of their corn. The establishment of the Signal Stations and the increased importance of the Malton base in the last third of the 4th century, would greatly add to the local demand for grain foods. Good corn-growing land extends over the limestone foot-hills to the north-west of Crossgates. Cattle, sheep and pigs were reared, the first-named providing most of the meat for the settlement. Hunting and fishing must have played a minor role for there is no evidence of these activities apart from some traces of shellfish. The sea is actually about 2½ miles distant.

A scatter of iron-slag occurred over a wide area and was especially noticed in the 1st century deposit in Ditch Excavation No. 1, and in a deposit, probably late 4th century in date, in Hut No. 4, where a heap of this material was present. An interesting find from the infilling of the 1st century ditch was the blacksmith's tongs (No. 38/2). The occurrence of the slag indicates that iron-working was carried on at Crossgates at least during the 1st and 4th centuries. The source of the iron-ore is unknown — it would seem unlikely that it was transported from the extensive deposits of the Cleveland Hills. The question of using ferruginous pebbles from the glacial gravel was discussed in connection with iron-smelting at *Elmswell* (p.31n).

The use of rough limestone boulders and slabs in the construction of the hut walls, as paving-stones and hearth-stones, in addition to the glacial boulders obtainable from the gravel deposits on the actual spot, shows that a certain amount of quarrying occurred, possibly on the site of the existing limestone quarries a half-mile north-west of the Romano-British settlement.

THE ANGLIAN SETTLEMENT

The sequence of events which mark the passing of the Romano-British settlement and the establishment of the Anglo-Saxons at Crossgates cannot be deduced from the archæological evidence. The prosperity of the late 4th century inhabitants can but reflect the peaceful conditions then prevailing. Whether or not these conditions came to an abrupt end with the arrival of the Anglian settlers is entirely uncertain. The continuous occupation of Crossgates during the 5th century seems possible, but remains unproven, and we can but hope that the excavations still proceeding will throw some light on this problem. A point that can be made is that there was a complete absence of Anglian pottery in the area of the 4th century huts. The new peoples occupied ground to the west, which was undisturbed by earlier structures, at some period during the 5th and/or 6th centuries, but at present it would be unsafe to offer a more definite opinion.

It is tempting to associate the Anglian settlement with the cemetery excavated by Lord Londesborough in 1857 in the limestone quarry about a half-mile north-west of the Crossgates gravel-pit workings and adjacent to the York-Scarborough road. From the graves a rich collection of jewellery, including articles of gold and silver, was recovered and subsequently a number of these pieces were deposited in the British Museum. Such valuable ornaments were obviously the possessions of important individuals and their association with the poverty-stricken huts of the Crossgates settlement would appear incongruous even if the question of date made such an association improbable, for the jewellery belongs to the 7th century.*

It would be of great interest to learn where the occupants of the Crossgates cemetery established their habitations, which must surely have been buildings of some substance. The scarcity of Anglian personal ornaments, which only amount to a few glass beads and probably a jet pendant (No. 46/1), is in keeping with the similar paucity of finds belonging to the earlier Romano-British inhabitants. The bronze brooches, elaborate bronze girdle-hangers and numerous amber necklaces of the East Yorkshire Anglian cemeteries (e.g. *Staxton*) are completely unrepresented at Crossgates.

The animal remains from the Anglian areas indicate that the horse was frequently used as food, although this species was completely absent on the Romano-British sites. The ox still provided the principal supply of meat but the sheep appears to have taken a minor place. It is surprising that wild animals were still unrepresented in the Anglian deposits, with the possible exception of the wild pig, as, at least, the remains of deer would be expected. However the Crossgates inhabitants appear to have been herdsmen and not hunters.

A brief summary of other early Anglian sites in the eastern portion of the Vale of Pickering is as follows: — (1) A habitation site of importance situated on a gravel hillock at Wykeham, partially excavated by Mr. J. W. Moore in 1951-2 (publication pending, finds in Scarborough Museum). (2) A cemetery at Spital Corner, Staxton, with possibly an occupation-site adjacent (see *Staxton*). (3) An occupation-site on Flixton Ings excavated by the Scarborough Philosophical and Archæological Society in 1934 (finds in Scarborough Museum). All three sites have produced pottery comparable with that of the Crossgates settlement and may well be contemporary.

* In connection with this jewellery, Mr. D. M. Wilson, of the British Museum, was kind enough to confirm the late date, "probably well into the 7th century. The jewellery is paralleled in such Kentish cemeteries as Sibertowold, in the Wigberlow grave in Derbyshire and on a number of other late sites." Further details of the Crossgates cemetery (with illustrations) will be found in the following papers:—

T. Wright: "Anglo-Saxon Antiquities discovered at Seamer Lime-quaries (sic.), *R.S.P.A.S.* for 1857, 16-17 (published 1858).

T. Wright: "Account of the Anglo-Saxon Jewellery, etc., found at Seamer in the East Riding (sic.) of Yorkshire," *J.B.A.A.*, XXI, 329-32 (1865).

APPENDIX I

REPORT ON SOIL SAMPLES FROM HUT-SITE No. 4.

By D. W. Humphries, Esq., B.Sc., F.G.S.
Dept. of Geology, University of Sheffield.

SAMPLE No. 1. From Deposit C. This is a slightly clayey sand with traces of charcoal on many of the grains and has probably been burnt. The material soluble in dilute acid amounts to about 10% of the whole and is chiefly iron oxide .

SAMPLE No. 2. Fire Flue. This again is a clayey sand having about 10-15% soluble in dilute acid. This soluble material is also mainly iron oxide. There is very little trace of charcoal in this specimen and no indication that it has been subjected to any great heat.

SAMPLE No. 3. Fire Hole. This is mostly small fragments of barytes in an iron-rich clayey matrix (*c*.20% soluble in acid). The barytes seems to contain a small amount of blende (ZnS) and possibly galena (PbS). This may be the "fines" from a crushed ore trampled into clay. The specimen definitely appears to have been heated.

SAMPLE No. 4. Charcoal from Fire-hole. A few fragments consist of wood charcoal, but the bulk is slightly charred coaly material, probably a brown coal or lignite. It is known that the coals of the Inferior Oolite (Jurassic) of Yorkshire have been worked for fuels.

It should be noted that many natural sands and clayey sands contain a variable amount of soluble material most of which is iron oxide. The amount is commonly of the order of 5-10%. It should not therefore, I think, be assumed that the iron present in these samples has all been derived from iron smelting.

Note by J.G.R. Thin seams of coal occur in the Lower Estuarine and Middle Estuarine beds of the Lower Oolite series. The nearest exposures of these rocks to the Crossgates area are about three miles distant in the bays of Cornelian, Cayton and Gristhorpe. There appears to be no evidence of workings in these bays, but coal was formerly obtained from the same beds at Yearsley and Grimston, about 12 miles west of Malton.

APPENDIX II

REPORT ON QUERN STONE No. 41/2.

By P. A. Sabine, Esq.
Petrographical Dept., Geological Survey & Museum, London.

It proves to be a lava (a vesicular basanite) of a type found in the Laacher See (Niedermendig) area on the eastern slopes of the Eifel in Germany. The rocks in our collection from this area are tephrites, lacking the mineral olivine which is present in your specimen, but basanites (which resemble tephrites but contain olivine) have been described from the Laacher See area.

Note by J.G.R.: Querns of " Niedermendig Lava " are of common occurrence on the Roman sites in Britain. They were actually obtained from the nearby Mayen quarries, as those of Niedermendig did not begin working until Mediæval times. (See " The Quern-quarries of Mayen in the Eifel," O. G. S. Crawford in association with J. Röder and others, *Antiquity*, 1955, 68 ff.).

ABBREVIATIONS & REFERENCES

A.A.	*Archaeologia Aeliana.*
Ant. Journ.	*Antiquaries Journal.*
Arch. Journ.	*Archaeological Journal.*
C.W.A.S.	*Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.*
H.M.P.	*Hull Museum Publications.*
J.B.A.A.	*Journal of the British Archaeological Association.*
J.R.S.	*Journal of Roman Studies.*
P.P.S.E.A.	*Proceedings of the Prehistoric Society of East Anglia.*
P.S.A.S.	*Proceedings of the Society of Antiquaries of Scotland.*
R.M.D.R.	*Roman Malton and District Reports.*
R.S.P.A.S.	*Reports of the Scarborough Philosophical and Archaeological Society.*
Y.A.J.	*Yorkshire Archaeological Journal.*

Bar Hill	G. Macdonald and A. Park; "The Roman Forts on the Bar Hill, Dumbartonshire," *P.S.A.S.*, XL, 403-546 (1906).
Bewcastle	I. A. Richmond, K. S. Hodgson and K. St. Joseph; "The Roman Fort at Bewcastle," *C.W.A.S.*, n.s. XXXVIII, 195-237 (1938).
Birdoswald	I. A. Richmond and E. B. Birley; "Excavations on Hadrian's Wall in the Birdoswald-Pike Hill Sector," *C.W.A.S.*, n.s. XXX, 169-205 (1930).
Brough 1934	P. Corder; "Excavations at the Roman Fort of Brough, 1934," *H.M.P.* No. 185.
Brough 1935	P. Corder and T. Romans; "Excavations at the Roman Town at Brough, East Yorkshire, 1935," *H.M.P.* No. 189.
Brough 1937	P. Corder and T. Romans; "Excavations at the Roman Town of Brough-Petuaria, 1937," (Hull, 1938).
Carrawburgh	I. A. Richmond and J. P. Gillam; "The Temple of Mithras at Carrawburgh," *A.A.*, 4th series, XXIX, 62 (1951).
Cawood	P. Corder; "A Roman Site near Cawood," *Y.A.J.*, XXXII, 333-8 (1935).
Corder 1937	P. Corder; "Petuaria," *Discovery*, Dec. 1937, 375-8.
Corder 1956	P. Corder; "Parisian Ware," *Y.A.J.*, XXXIX, 48-52 (1956).
Costa Beck	M. K. Clark and others; "Iron Age Sites in the Vale of Pickering," *Y.A.J.*, XXX, 157-72 (1931).
Crambeck 1928	P. Corder; "A Roman Pottery at Crambeck, Castle Howard," *R.M.D.R.*, No. 1 (1928).
Crambeck 1937	P. Corder; "A Pair of Fourth-Century Romano-British Kilns near Crambeck," *Ant. Journ.*, XVII, 392-413 (1937).
Crossgates 1948	N. Mitchelson; "A Late Fourth-Century Occupation Site at Seamer, near Scarborough," *Y.A.J.*, XXXVII, 420-8 (1950).
Eastburn	T. Sheppard; "Excavations at Eastburn, East Yorkshire," *Y.A.J.*, XXXIV, 35-47 (1938).
Elmswell 1935-6	A. L. Congreve; "A Roman and Saxon Site at Elmswell, East Yorkshire, 1935-6," *H.M.P.* No. 193 (1937).
Elmswell 1937	A. L. Congreve; "A Roman and Saxon Site at Elmswell, East Yorkshire, 1937," *H.M.P.* No. 198 (1938).
Elmswell 1938	P. Corder; "Excavations at Elmswell, East Yorkshire, 1938," *H.M.P.* No. 207 (1940).
Filey	See *Signal Stations.*
Gazetteer	M. K. Clark; "A Gazetteer of Roman Remains in East Yorkshire," *R.M.D.R.*, No. 5 (1935).
Haverfield 1912	F. Haverfield; "Notes on the Roman Coast Defences of Britain, especially in Yorkshire," *J.R.S.*, II, 201-14 (1912).
High House	F. G. Simpson; "Excavations on the line of the Roman Wall in Cumberland during the years 1909-12," *C.W.A.S.*, n.s., XIII, 297-397 (1913).
Hornsea	T. Sheppard; "An Anglo-Saxon Cemetery at Hornsea," *H.M.P.* No. 97 (1913).
Huntcliff	W. Hornsby and R. Stanton; "The Roman Fort at Huntcliff, near Saltburn," *J.R.S.*, II, 215-32 (1912).
Kendall 1902	P. F. Kendall; "A System of Glacier Lakes in the Cleveland Hills," *Quarterly Journal of the Geological Society*, LVIII, 471-571 (1902).

Knapton	See *Langton.*
Langton	P. Corder and J. L. Kirk; "A Roman Villa at Langton, near Malton, East Yorkshire," *R.M.D.R.*, No. 4 (1931).
London Mus. Roman Cat.	"London in Roman Times," *London Museum Catalogues,* No. 3 (1930).
Malton	P. Corder; "The Defences of the Roman Fort at Malton," *R.M.D.R.*, No. 2 (1930).
Mortimer	J. R. Mortimer; "Forty Years' Researches in British and Saxon Burial-Mounds of East Yorkshire," (London, 1905).
Newbald	T. Sheppard; "Saxon Antiquities recently found near Hull," *H.M.P.* No. 11 (1902).
Norton	R. H. Hayes and Sir Edward Whitley; "The Roman Pottery at Norton, East Yorkshire," *R.M.D.R,* No. 7 (1950)
Poltross Burn	J. P. Gibson and F. G. Simpson; "The Milecastle on the Wall of Hadrian at the Poltross Burn," *C.W.A.S.*, 2nd ser., XI, 390-461 (1910).
Rowntree 1931	A. Rowntree (editor); 'The History of Scarborough' (London, 1931).
Rudston	K. A. Steer; "The Roman Villa at Rudston (E. Yorks.), Fourth interim report: the Excavations of 1936," *Y.A.J.*, XXXIII, 321-38 (1937)
Sancton	T. Sheppard; "Some Anglo-Saxon Vases in the Hull Museum," Parts 1 and 2, *H.M.P.* Nos. 66 and 67 (1909).
Scarborough	See *Signal Stations.*
Signal Stations	M. R. Hull; "The Pottery from the Roman Signal Stations on the Yorkshire Coast," *Arch. Journ.*, LXXXIX, 220-50 (1933).
Stanwick	Sir Mortimer Wheeler; "The Stanwick Fortifications, North Riding of Yorkshire," (Oxford, 1954).
Staxton	T. Sheppard; "Anglo-Saxon Cemeteries in East Yorkshire," *The Naturalist,* 1938, 1-23, 109-114, 165-171.
Thornton-le-Dale	See *Costa Beck.*
Throlam	P. Corder; "The Roman Pottery at Throlam, Holme-on-Spalding Moor, East Yorkshire," *R.M.D.R.* No. 3 (1930).
Traprain Law	A. H. A. Hogg; "The Votadini," in "Aspects of Archaeology in Britain and Beyond," Edited by W. F. Grimes (London, 1951).
York, St. Sampson's Square	P. Corder; "The Roman Bath discovered in 1930-1 during the reconstruction of the Mail Coach Inn, St. Sampson's Square, York," *Proc. of the Yorkshire Architectural and York Archaeological Society,* I, 2-21 (1933).